

**GINGULAR'S RESPONSE TO FCC'S
GENERAL INFORMATION REQUEST
ISSUED JUNE 30, 2004**

Submitted herewith are Cingular Wireless Corporation's ("Cingular") responses to the June 30, 2004 Information Request ("Information Request").¹ In responding to the Information Request, Cingular has provided responsive, non-privileged information. Where a particular request called for it, Cingular has responded with a narrative response. If the particular request called for documents or data, Cingular has provided responsive, non-privileged data or documents.

In the case of document requests, Cingular believes that the FCC's requests called for information that was requested by and produced to the Department of Justice ("DOJ") in connection with its Second Request for Information and Materials ("Second Request") pursuant to its review of this transaction. In other words, if the DOJ Second Request had included the FCC requests, it would not have made a material difference in either the custodians searched or the documents produced from such custodians. Accordingly, Cingular has produced documents in response to the Information Requests from among those custodians at Cingular, BellSouth and SBC searched in response to the DOJ's requests and from among the documents produced to the DOJ by such custodians. To conduct additional searches in response to the Commission's Information Request would have been unduly burdensome and was likely to yield only duplicative and/or cumulative information. In the case of data requests, where the data requested had been previously produced to the DOJ, Cingular produced data from that production. Where the data requested in the Information Requests had not been produced to the DOJ, Cingular has

¹ See Letter to David C. Jatlow, AT&T Wireless Services, Inc., and David G. Richards, Cingular Wireless LLC, from John B. Muleta, Chief, Wireless Telecommunications Bureau, in WT Docket No. 04-70 (June 30, 2004).

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produced available, responsive and non-privileged data. Attached as Exhibit II.1 is a list of the document custodians that indicates, for each custodian, the subparts of the Information Request to which his or her documents and/or data are most responsive.

Much of the information contained in this response and in the exhibits attached hereto is both commercially and financially sensitive and concerns proprietary information that neither Cingular nor its parents would in the normal course of business reveal to the public or their competitors.² Accordingly, that information is being submitted on a confidential basis pursuant to the Protective Order in WT Docket No. 04-70.³ A public, redacted version of this filing is being filed electronically.

Cingular expects prompt notification of any "Acknowledgment of Confidentiality" seeking access to the documents attached hereto, consistent with the Protective Order. Cingular further requests that at the conclusion of this proceeding all confidential materials submitted be returned.

² The document production consists of documents tendered to the DOJ under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (as amended) (the "HSR Act"), which grants blanket confidentiality protection. See 15 U.S.C. § 18a(h).

³ See *Order Adopting Protective Order*, DA 04-729, App. A at ¶ 2 (WTB rel. Mar. 17, 2004) ("Protective Order"); see also 47 C.F.R. § 0.457(d)(1).

ATTACHMENT A

II. Document and Data Request Regarding Material Contained in Application

1. **Provide all documents, including data and analyses, provided to, or reviewed by Messrs. Gilbert, Hogg, Austin, McGaw, Sievert, and Slemens, in preparing their declarations.**

Responsive documents provided to or reviewed by Messrs. Gilbert, Hogg, Austin, and McGaw in preparing their declarations are being transmitted herewith as Exhibit II.1 unless privileged. Documents related to Sievert and Slemens are being provided by AT&T Wireless Services, Inc. ("AWS"). AWS will be submitting a separate response to the information request that responds to questions specifically directed toward it.

2. **In paragraphs 25 and 26 of the Gilbert Declaration, Gilbert discusses the multiple technologies supported by AT&T Wireless and Cingular. Explain:**

- a. **Why AT&T Wireless and Cingular have not chosen to accelerate the migration of customers from TDMA to GSM?**

See response to Question 2c infra.

- b. **What would be the estimated cost to migrate customers from TDMA to GSM by:**
 - i. **October 2005?**
 - ii. **October 2006?**

See response to Question 2c infra.

- c. **What programs have AT&T Wireless and Cingular put into effect to migrate customers from TDMA to GSM and how successful have they been?**

Cingular is expeditiously transitioning from TDMA to GSM in order to provide consumers with the ultimate benefits associated with its lower-cost and higher-quality

GSM networks. In the relatively short period since Cingular made the decision to adopt GSM, it has spent billions of dollars and countless man-hours to deploy national GSM networks. [REDACTED]

[REDACTED] Cingular will continue to fill holes and improve coverage for years to come. As of March 2004, Cingular had already transitioned its customer base to approximately [REDACTED]

[REDACTED] Cingular expects the post-merger company to continue this rapid progress of transition to GSM. Because of the efficiency advantages of GSM over TDMA, Cingular can realize significant cost and capacity benefits from transitioning customers to GSM. In addition, as data services continue to grow in popularity, the opportunities for increased data revenue afforded by GSM handsets supporting GPRS/EDGE data services will be increasingly important. Thus, the transaction will do nothing to change Cingular's incentives to transition from TDMA to GSM in as rapid a manner as is commercially feasible.

Nonetheless, even at the current aggressive pace of transition, the process of migrating tens of millions of consumers to a new technology requiring new equipment in an orderly and commercially sensible manner that is least disruptive to customers will take [REDACTED]. Relative demand for TDMA as compared with GSM has declined sharply over the last year as GSM services have become available on an essentially national scale, but Cingular's need to devote significant spectrum to its TDMA network is ultimately driven by the minutes of use ("MOUs") required of that network rather than

the relative number of customers on the TDMA network. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Attempting to short-cut the transition process through some form of mass “flash cut” approach would require [REDACTED] in additional expense, while imposing substantial hardships on customers that would almost certainly result in large-scale customer defections and associated loss of marketplace goodwill that could harm Cingular and adversely impact the industry for years to come. In addition to the inconvenience that Cingular’s own TDMA customers would encounter, the substantial numbers of customers of Cingular’s roaming and resale partners who rely on the Cingular TDMA network would also confront inconvenience at best and service disruption at worst.

If faced with spectrum limitations that would prevent Cingular from continuing to support the combined company’s current and projected analog, TDMA and GSM requirements while at the same time deploying UMTS, Cingular would confront two wholly unacceptable scenarios: either delaying UMTS implementation or incurring commercially unjustifiable expenses and alienating customers through a precipitous termination of TDMA services. Thus, the combined spectrum afforded by the merger

provides the only near-term route to deploy a national UMTS network while continuing the orderly transition of the tens of millions of TDMA customers of the combined company in a manner that minimizes consumer inconvenience and maintains the quality customers have come to expect and demand.

Current Steps to Facilitate the GSM Transition

Cingular has already been very successful in its efforts to transition its customer mix in favor of GSM. From a marketing point of view, Cingular promotes GSM phones and plans [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴ [REDACTED] of Cingular's total May 2004 gross additions were GSM customers, which reflects the fact that gross additions for resale partners and prepaid subscribers included a significant percentage of TDMA phones. Cingular has recently completed the process of deploying systems to support prepaid GSM services, and expects that its prepaid gross additions will be heavily weighted toward GSM in the near future.

[REDACTED] Thus, Cingular's need to devote a substantial portion of its spectrum to its TDMA network is due mostly to the large portion of the existing subscriber base currently using TDMA equipment rather than by an influx of new TDMA customers.

For these legacy customers, Cingular has incentives in place to encourage them to transition to GSM. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] As discussed above, the post-merger Cingular will continue to have every incentive to promote the orderly transfer of customers to GSM in order to capture the cost benefits and potential for revenue enhancements offered by GSM.

Sound Finance and Customer Service Require an Orderly GSM Transition

While Cingular is focused on transitioning its customer base to GSM, financial, customer relations and network issues dictate that it accomplish that transition in an orderly manner. First, there is substantial expense associated with transitioning from TDMA to GSM, particularly in terms of customer equipment and marketing costs. Today, Cingular incurs equipment subsidy expenses [REDACTED] each TDMA customer who transitions to GSM equipment. Because this is a significant expense,

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

In the event of a hypothetical flash cut procedure, however, these expenses would be exponentially higher. In order to alert all TDMA customers of the need to switch to GSM equipment before network shutdown, Cingular would need to invest [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Cingular's substantial investment in TDMA assets is also reflected on its balance sheet and income statements. [REDACTED]

[REDACTED] In the event of a precipitous shutdown of the TDMA network, it is likely that accounting principles would require Cingular to write-down the value of its TDMA assets, which would have a substantial negative financial impact on Cingular and its parents and, by corollary, a negative impact on the investment community.

In addition to these direct unnecessary and precipitous financial consequences, Cingular also could create substantial customer dissatisfaction if it transitioned away from TDMA on such an aggressive schedule that TDMA customers would be stranded. For many groups of TDMA customers, it is unlikely that any strategy implemented over the next few years will be effective in convincing them to transition to GSM. For these

customers, any premature termination of TDMA network services would result in service disruption and severe customer dissatisfaction, which would, in turn, lead to substantial increases in churn and long-term loss of customer goodwill. Customers in this category include:

- Rural Customers in TDMA-Only Coverage Areas. Cingular (including its roaming partners such as AWS) offers GSM coverage serving approximately 270 million POPs. Because TDMA coverage has been available much longer, it still is available, particularly through roaming, in some areas where GSM coverage is not. Cingular's GAIT phone coverage, which includes GSM, TDMA and analog service areas, covers 285 million POPs. Thus, consumers who regularly require service within the predominately rural territory served by TDMA, but not GSM, are likely to be unwilling to switch to GSM coverage. Cingular will continue to expand and improve its GSM network, of course (and encourage its roaming partners to do likewise), but it will be a gradual process over several years before GSM is available everywhere that it is currently served by TDMA.
- Prepaid Subscribers. [REDACTED]
[REDACTED]
[REDACTED] Due to the nature of prepaid subscriber arrangements, Cingular would have no reliable method to contact such users to alert them of the need to exchange their handsets prior to a flash cut process. Thus, a significant number of customers would likely be unexpectedly without service on the discontinuance of the TDMA network, despite having paid in advance for service.
- Resale Customers. [REDACTED]
[REDACTED] While new Cingular resale agreements require the use of GSM equipment, existing resellers continue to sell TDMA handsets. Because these resale customers are not direct Cingular customers, they would likely face service outages in the event that Cingular prematurely terminated TDMA services unless the relevant reseller was willing to subsidize the cost of new GSM equipment to meet an expedited Cingular transition schedule.
- Roaming Partners. Many of Cingular's roaming partners have invested substantial sums in TDMA networks (often at Cingular's behest in order to provide TDMA roaming), and have substantial TDMA subscriber

bases. [REDACTED]

Cingular's TDMA roaming partners and their predominately rural customers would face significant harm if Cingular prematurely terminated TDMA service because their TDMA subscribers would no longer be able to enjoy the benefits of national TDMA roaming and, without roaming revenue from the Cingular/AWS subscriber base, they would likely face difficulty amortizing their TDMA investments

- "Procrastinators." In Cingular's experience with analogous transitions such as area code splits, a small core of consumers is unlikely to affirmatively turn in TDMA handsets for GSM replacement no matter what inducements are offered or notice is provided. [REDACTED]

Cingular estimates that the customer dissatisfaction that a precipitous transition away from TDMA would provoke in these groups with a special affinity for TDMA would trigger a spike in churn among TDMA customers, [REDACTED]

[REDACTED]. Based on average income generated from Cingular TDMA customers, this spike in churn would cost Cingular [REDACTED] in net present value for each incrementally churning customer. In addition, Cingular anticipates that it would face an additional, if unquantifiable, ongoing negative impact from being perceived to have abandoned a substantial group of its customers.

Finally, the Cingular GSM network as currently configured could not support the total Cingular customer base, much less the combined customer bases of the two companies. Although Cingular expects that the combined spectrum and network efficiencies created by the merger will allow the post-merger company to support its projected GSM demand once the networks are fully integrated, this process will take many months, if not years, to complete, and additional network equipment would still likely be necessary to support an accelerated TDMA phase-out schedule. In addition, any

major network transition is an enormously complex process fraught with risk. The well-publicized billing system issues encountered by AWS late last year in adding new GSM customers is just one example of the unforeseen problems that can result from such a process. Cingular has no intention of increasing the risk that it will encounter such difficulties through a hastily executed and imprudent transition. For these reasons, it is highly unlikely that Cingular would terminate TDMA services while substantial numbers of customers remain dependent on TDMA service.

Estimated Costs of a Hypothetical Accelerated "Flash Cut" GSM Transition

While Cingular certainly has no plans to discontinue TDMA service by October 2005 or October 2006, for the purpose of responding to the Commission's hypothetical, it has calculated the estimated expenses associated with an aggressive program to "flash cut" remaining customers using Cingular's TDMA network as of those dates on the basis.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The following elements are relevant to the financial implications of a hypothetical flash cut:

- Current TDMA Customer Base. [REDACTED]
[REDACTED]
- TDMA Migration Rate. [REDACTED]
[REDACTED]

- [REDACTED]
- Marketing and Equipment Costs. Cingular assumes that TDMA customers would need to be reached with multiple advertisements to notify them of the need to exchange their handsets prior to the flash cut date, and offered an attractive choice of free or heavily subsidized GSM handsets, as well as a free accessory, in order to make up for the customer inconvenience the handset exchange would necessitate.
[REDACTED]
 - Increased Churn Cost. Cingular estimates that the customer inconvenience associated with the flash cut procedure would trigger a substantial spike in churn among TDMA customers who refuse to transition to GSM [REDACTED]
[REDACTED]
 - Network Write-Off Expenses. This element represents the unamortized value of TDMA assets that would need to be written-off in the event of a premature TDMA network shutdown: [REDACTED]
[REDACTED]
 - Network Costs. Neither Cingular nor AWS currently has a GSM network with sufficient capacity to support the entire customer base of both companies if they were converted to GSM equipment. Cingular expects to reap substantial efficiencies from integrating the networks of the two companies, and thus it is possible that the post-merger company may have sufficient capacity for such a process, although additional network equipment may be necessary to support a complete GSM transition. Moreover, to the extent network integration is incomplete as of the hypothetical "flash cut" time, the amount of additional network equipment required to handle the increased network demands would likely be quite significant. Cingular has not attempted to quantify this expense.
 - Other Revenue Effects. Because transitioning TDMA customers to GSM reduces marginal costs and affords the opportunity for incremental data revenue, Cingular would reap certain countervailing benefits from

TDMA customers converted to GSM. Because TDMA plans tend to be priced less attractively than GSM plans, however, Cingular would also expect converted customers to generate somewhat lower voice ARPU, at least initially. Cingular would also lose TDMA roaming revenue from its roaming partners, [REDACTED]

[REDACTED] in the event of an expedited TDMA shutdown. Cingular has not attempted to quantify the net impact of these revenue effects in the cost projections provided above.

- d. **What was done by AT&T Wireless and Cingular to move customers from analog to TDMA? How many customers remain on AT&T Wireless's and Cingular's analog systems?**

Cingular has, in general, not conducted specific marketing activities targeted toward moving analog customers to TDMA or GSM plans. Instead, Cingular has encouraged migration to digital technologies in a similar manner to that employed to facilitate GSM usage: by concentrating advertising on digital technologies, making digital plans and services more attractive from a price and quality perspective, and offering analog customers the opportunity to upgrade to digital handsets. [REDACTED]

[REDACTED]

- e. **When did AT&T Wireless and Cingular begin migrating customers from analog to TDMA? Provide the percentage of customers migrated for each six-month period following the initiation of this migration.**

See response to Question 2d supra.

- f. **Provide all data and analyses that discuss the cost and timing of migration from TDMA to GSM and from analog to TDMA or GSM.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibit II.2 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its

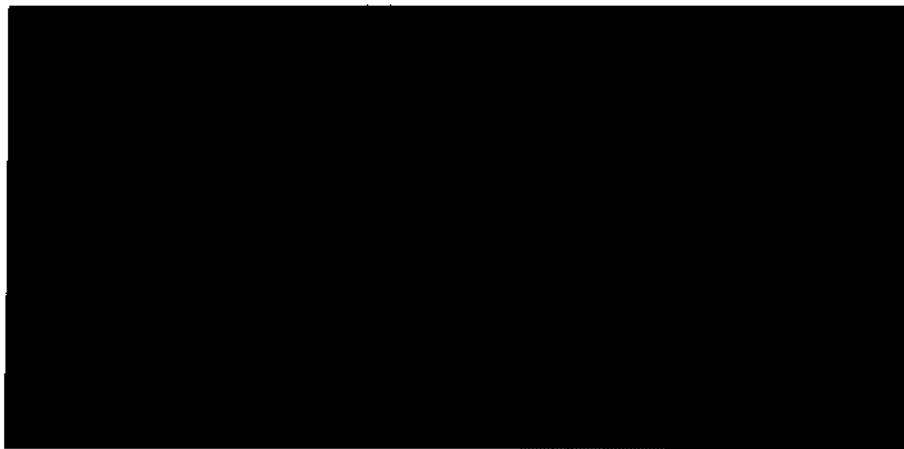
Second Request pursuant to its review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

3. In paragraph 29 of the Gilbert Declaration, Gilbert discusses the savings that will be generated from the efficiencies gained by the merger. Provide further detail and explanation regarding:

a. The projected cost to integrate AT&T Wireless's and Cingular's systems.

Professor Gilbert's statement was based upon the synergies model used by Adam Gasper of Cingular to evaluate the contemplated acquisition. The output of the model is provided at Exhibit II.1.

Integration costs are captured in two places in the synergies model. First, the model page entitled "One Time Charges" shows the operating and capital cost charges related to the acquisition (such as lease termination expenses, costs associated with reductions in force, and IT systems conversion) but does not include costs for actually integrating the two networks. The totals from the model are reproduced in the chart below:



[REDACTED]

Costs for integrating the two networks are included in the capital cost estimates shown in the model, but are not split out from total estimated capital expenditures (which include network expansion and improvements). Total estimated capital expenditures for the merged company are shown in the chart below

[REDACTED]

- b. **Whether the cost to integrate the AT&T Wireless and Cingular systems is included in the saving estimations provided by the parties.**

Yes – the costs to integrate the merging firms' systems are included in the savings estimate.

- c. **Whether the discounted present value of this integration will result in net efficiency gains. Provide an estimate of the net efficiency gain (or loss), explain how this estimate was calculated, and provide all data and assumptions used in the calculation.**

The discounted present value of the integration will result in an efficiency gain estimated by Cingular [REDACTED]. The methodology for the calculation and the assumptions used are shown in the synergies model identified above. *See also* Exhibit II.1.

- d. **Provide all data and analyses that support or contradict the responses to the above requests.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibit II.1 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its

Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

4. **In paragraphs 25 and 26 of the Gilbert Declaration, Gilbert discusses the trend towards national calling plans.**
 - a. **Provide the percentage of AT&T Wireless and Cingular customers purchasing national plans reported monthly from January 1, 2002 to the present.**

Data responsive to this question is set forth in a spreadsheet contained in Exhibit

II.4.

- b. **List and describe the national and regional plans that were available to new AT&T Wireless and Cingular customers from January 1, 2002 to the present, including the scope of coverage for each regional plan.**

All plans are fully described in response to Question 6 of Attachment A, Part III.

A table identifying all plans as local, regional, or national is found in Exhibit II.4.

- c. **Provide the churn rates for AT&T Wireless's and Cingular's regional and national plans, respectively, reported monthly from January 1, 2002 to the present.**

Data responsive to this question is set forth in the spreadsheet contained in

Exhibit II.4.

- d. **Provide all data and analyses that discuss the trend toward national plans, consumer preferences for regional versus national plans, and strategies and efforts by AT&T Wireless and Cingular to promote national plans.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibit II.4 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its

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Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

- c. **Provide all maps and analyses that indicate how the regional wireless telephony market areas have changed over the last three years (January 1, 2002 to the present).**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibit II.4 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

- 5. **In paragraphs 59 through 61 of the Gilbert Declaration, Gilbert asserts that the pricing of wireless plans is national. Provide:**

- a. **The methodology used in selecting the "50 small rural areas" referenced in paragraph 60.**

As described in paragraph A7 of the Appendix to Dr. Gilbert's Declaration, the 50 small rural areas analyzed in the web survey were determined by selecting the 11 RSAs in which Cingular's and AWS's cellular coverage overlap (the Ohio 10 – Perry RSA was determined not to be an area of overlapping cellular coverage) and 40 of the 500 smallest U.S. localities tracked by Telephia.

- b. **All data and analyses on national and regional calling plans, handset prices, and promotions that Gilbert reviewed in reaching his conclusion that there is little to**

**no variation in prices for calling plans and handsets
that is correlated with industry structure at a local level.**

Data and analysis responsive to this question are found Exhibits II.5 and II.1.

6. **In paragraph 65 of the Gilbert Declaration, Gilbert provides HHIs based on flow share. Provide all data and analyses that were used to calculate the flow share data presented in Table 4.**

Data and analysis responsive to this question are found in Exhibits II.6 and II.1.

7. **In footnote 67 of the Gilbert Declaration, Gilbert states that churn data suggests that AT&T Wireless and Cingular are not substitutes. Provide:**
- a. **The source for the churn data referenced in footnote 67, as well as all data and analyses that address whether consumers regard Cingular and AT&T Wireless as next-best substitutes.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibits II.7 and II.1 (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

- b. **Churn rates by relevant area, and include the percentage of churning customers leaving AT&T Wireless and Cingular who go to each competitor in each relevant area.**

Responsive data and analyses are provided in Exhibits II.7 and II.1.

8. **In paragraphs 83 and 84 of the Gilbert Declaration, Gilbert states that pricing is driven primarily by national competition. Provide:**
- a. **The underlying data and analysis for the conclusion in paragraph 84 that price competition does not decline**

significantly in regions with only one or two major carriers rather than five to seven carriers.

Responsive data and analyses are provided in Exhibits II.8 and II.1.

- b. **All data and analyses that address whether price competition varies from region to region as the number of wireless competitors varies.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibits II.8 and II.1 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

- 9. **Provide all spreadsheets contained in Gilbert's Appendices in electronic form (*i.e.*, Microsoft Excel or compatible format).**

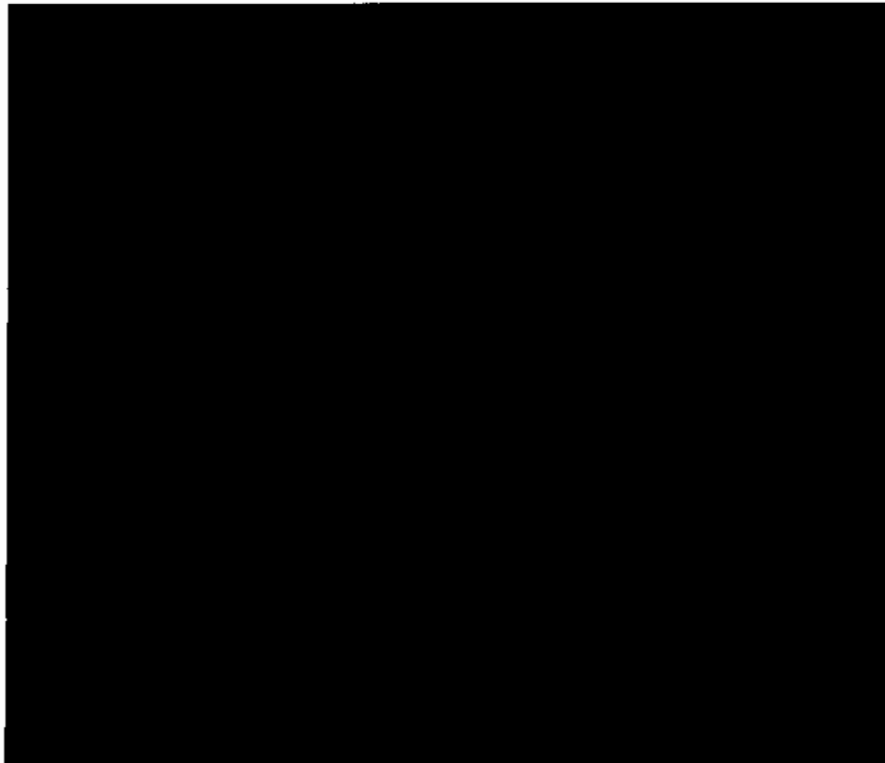
Responsive data and analyses are provided in Exhibits II.9 and II.1.

- 10. **In footnote 8 of the Hogg and Austin Declaration, they assert that a quick conversion to GSM technology would have a disparate impact on rural customers.**
 - a. **Provide the share of AT&T Wireless and Cingular customers with analog, TDMA, and GSM handsets by RSAs and MSAs.**

Cingular does not track customer handset technology data on a RSA/MSA basis. To provide an illustration of Cingular's relative urban/rural technology mix, Cingular has prepared the two comparative tables below. First, Table II.10.1 provides a snapshot comparison of the minutes of use of GSM, TDMA and analog technologies in representative rural and urban areas during the week of June 6-12, 2004. As the

snapshot illustrates, a higher percentage of TDMA and particularly analog MOUs on the Cingular network is generated in rural areas.

TABLE II.10.1



In addition, attached in Exhibit II.10 is a spreadsheet enabling the Commission to identify the mix of subscribers using GSM, TDMA and GAIT handsets as of March 2004 by the geographic segments tracked by Cingular in the ordinary course of business. While this spreadsheet does not segment subscribers according to urban and rural classifications, Table II.10.2 provides an illustrative comparison of urban and rural areas by comparing the 10 largest and smallest Cingular sales market areas ranked by subscriber count as proxies for “urban” and “rural” areas. As the table illustrates, populous urban areas are more heavily skewed toward GSM users than rural areas.

Table II.10.2

Although the attached spreadsheet does not separately break out analog handsets, the MOU snapshot data illustrates that analog usage is disproportionately concentrated in rural areas.

- b. **Do the incentives to trade-in handsets, offered by AT&T Wireless and Cingular, differ in RSAs and MSAs, and if so, how?**

Cingular does not vary incentives for upgrading handsets based on whether the customer lives in a rural or metropolitan area.

- c. **Provide all data and analyses that address whether a quick conversion to GSM technology would have a disparate impact on rural customers.**

The disproportionate impact that an accelerated termination of TDMA and analog services would cause to rural consumers is discussed in Question 2 *supra*.

11. **In paragraph 15 of the McGaw Declaration, McGaw discusses Cingular's "fast-forward" service. Discuss the following:**

- a. **Does AT&T Wireless plan to offer a feature similar to Cingular's fast forward service?**

AWS is responding to this question under separate cover.

- b. **Is AT&T Wireless constrained in offering this service because it is not a wireline carrier?**

AWS is responding to this question under separate cover.

- c. **Is the "fast-forward" service available to all Cingular customers or is it limited to certain cities or regions? If**

it is limited, explain how it is limited, and where it is available.

Cingular's Fast Forward service is available to all Cingular customers.

- d. **Provide all underlying data and analyses that support the responses to the above questions (11.a – 11.c).**

AWS is responding to this question under separate cover.

12. **In paragraph 12 of the Sievert Declaration, Sievert states that the merger will reduce roaming charges. Provide all underlying data and analyses that address the possible effects of the merger on roaming charges.**

AWS is responding to this question under separate cover.

13. **In paragraphs 8 and 9 of the Slemons Declaration and paragraph 39 of the Hogg and Austin Declaration, they discuss the deployment of UMTS. Provide:**

- a. **A list of areas where AT&T Wireless and Cingular intend to deploy UMTS in 2004.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- b. A list of areas, excluding those areas contained in the response to question 13.a above, where AT&T Wireless and Cingular intend to deploy UMTS by 2007, including build-out plans and projected deployment dates.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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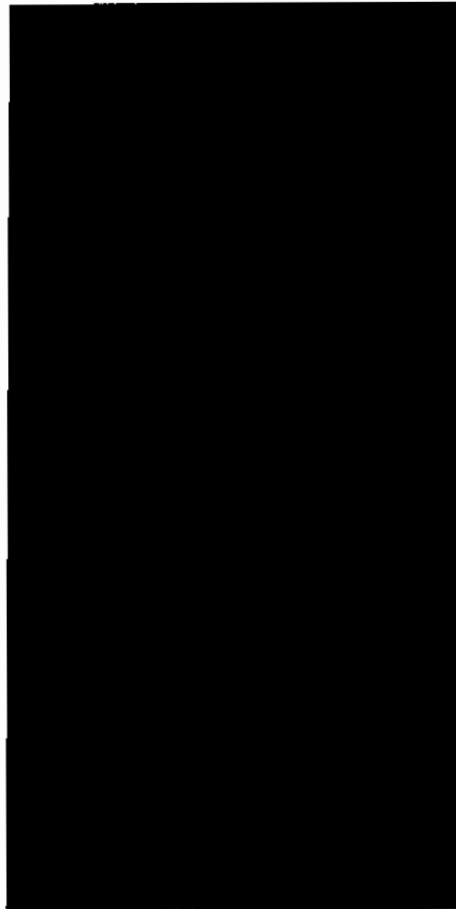
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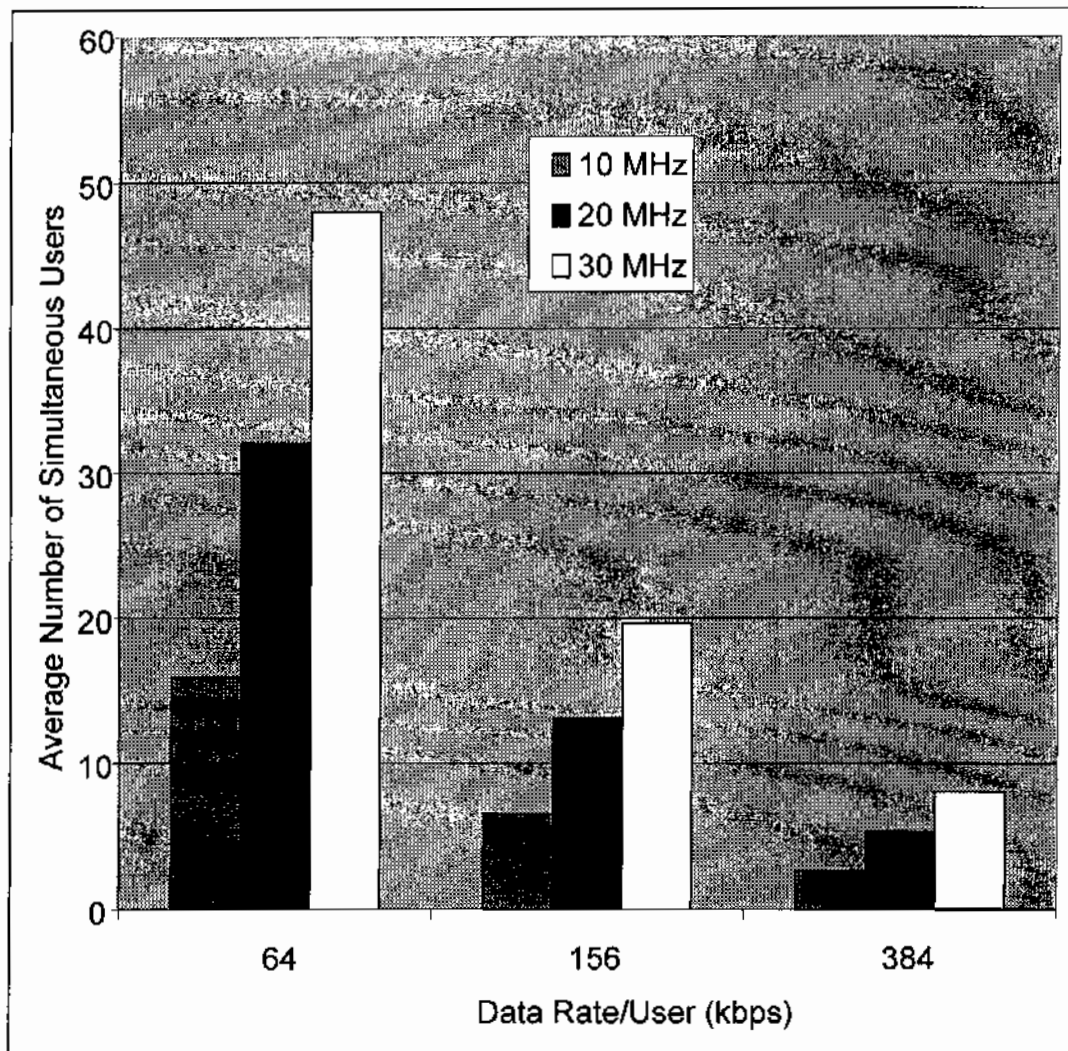
[REDACTED]

- [REDACTED]
- [REDACTED]
- c. **Information regarding whether UMTS has been deployed or, or if it has not, whether and when UMTS will be deployed in the markets Cingular acquired from NextWave.**

Please see Cingular's response to subparts (a) and (b), above.

- d. **All data and analyses that discuss how much spectrum will be used to provide UMTS service in each of these markets and the average data transmission speeds that the parties expect customers will be able to obtain.**

But for the merger, Cingular will be able to launch UMTS in each of these 38 MSAs using only a single 10 MHz carrier (5 MHz for upload and 5 MHz for download). The expected data transmission speeds that customers will be able to obtain will be a function of the number of simultaneous users within a cell sector. The chart below, reproduced from William Hogg's presentation to the Commission staff, shows the number of simultaneous users that can be supported at a given throughput.



Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibit II.13 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

14. **Explain the following statement in paragraph 96 of Exhibit 1 of the Application: "Thus, with the exception of home roaming**

– which discourages competitors from building and expanding networks – Cingular will continue to enter into roaming agreements with other carriers.”

The purpose of the above-quoted statement was to reinforce the fact that Cingular will continue to enter into roaming agreements. After the merger, Cingular will continue to have strong incentives, driven by intense competition throughout the wireless industry, to enter into reasonable roaming arrangements with other carriers and will actually improve the roaming experience of other carriers’ subscribers. With regard to home roaming, the statement reflects Cingular’s current policy that will remain unchanged by the merger. Specifically, where a competitor seeks a roaming agreement solely for an area for which both parties hold licenses, Cingular will be reluctant to enter into an agreement unless the competitor’s coverage area would produce benefits for Cingular subscribers.

Cingular and AWS have entered into roaming agreements with a host of carriers of all sizes and in all parts of the country. These agreements typically establish reciprocal roaming rates, *i.e.*, the rate that Cingular (or AWS) pays when its subscribers roam on the other carrier’s network are the same as the rates that the other carrier pays when its subscribers roam on Cingular’s (or AWS’s) network, and usually establish uniform rates for roaming throughout each carrier’s entire network, *i.e.*, the agreements do not charge a higher rate for roaming in some locations than is charged for roaming in other locations. Cingular has entered into long-term agreements with its most important roaming partners that specify the rates for GSM roaming (which will represent a larger and larger share of roaming minutes over time) for a substantial period of time – GSM roaming rates for T-Mobile until at least 2009, and for Dobson and Western Wireless until at least 2008.

Moreover, Cingular will continue to enter into roaming arrangements because the merged company still must rely on local and regional carriers to offer nationwide service. Typically, in the areas in which smaller regional carriers operate TDMA or GSM networks, Cingular and AWS either do not always offer service or the service they offer may not be optimal. Thus, where those situations persist, Cingular will continue to need roaming arrangements with smaller regional carriers.

[REDACTED]

After the merger, as is the case today, Cingular also will want to secure the incremental revenue that a roaming arrangement will generate from the use of its network capacity. Cingular also will want to secure the improvements in coverage for its own subscribers that a roaming arrangement will provide. Because roaming arrangements will continue to benefit both Cingular and its current and potential roaming partners, there is every reason to expect that such arrangements will continue to be negotiated on terms that are mutually beneficial to both parties.

As Rural Cellular Corporation explained in its comments to the FCC concerning the merger, Cingular and its roaming partners have a “symbiotic relationship . . . that allows customers of each entity to benefit from roaming agreements that will be continued upon completion of the merger.”⁵ Because of this relationship, Cingular’s roaming partners – and the customers of those roaming partners – will benefit from the

⁵ Letter from Richard P. Ekstrand to Marlene H. Dortch, May 19, 2004.

merger through the improved quality of the merged company's services and through the merged company's ability to deploy new services more broadly and more quickly. As Rural Cellular explained, "to succeed we must have a strong national partner. The combined company that Cingular proposes is more likely to develop and deploy new services that we can also then deploy. . . . A combination of [Cingular and AWS] means a more efficient roaming relationship . . . making combined Cingular a better roaming partner and a more attractive service offering for our customers."

In some instances where there is no symbiotic relationship, Cingular may be unwilling to enter into roaming agreements. Home roaming represents one such instance and occurs when a competitor in a given area seeks to roam on Cingular's network in the same area (*i.e.*, both parties hold licenses to serve the same area). If Cingular receives a request for home roaming only, it is unlikely to grant the request unless there would be some measurable benefit for Cingular subscribers in terms of coverage or quality. Such an approach is consistent with the operation of market forces in a competitive environment. A competitor should not be rewarded for its decision not to build-out in a given area by relying on the investments made by another licensee in the same area. The competitor's customers still have access to manual roaming on the Cingular network and the competitor retains the ability to expand its coverage and eliminate the need for home roaming.

In most instances, parties are not seeking home roaming. Instead, roaming requests generally involve numerous areas and home roaming either is not involved or is incidental to the larger roaming request. For example, Cingular has entered into roaming agreements with Dobson and others -- even though these agreements produce home

roaming in certain areas – because these carriers expand the service area or improve the quality available to Cingular’s subscribers.

15. **On page 23 of Exhibit 1 of the Application, the Applicants assert that the combined company will be able to work with manufacturers to customize device interfaces. Provide all data and analyses that discuss the minimum number of subscribers necessary for it to be economically justified for a device manufacturer to develop customized items.**

The discussion in Exhibit 1 of the Application is not driven by any specific data or quantified analyses, as there is no standard “minimum” number of subscribers necessary to justify customized devices in all cases. Whether a particular cost-benefit proposition for a particular customization proposal is acceptable will vary based on a number of inputs, including market conditions, manufacturing costs, competitive offers, uniqueness of new technologies, service requirements, *etc.*

Rather, the discussion is driven by the general principle that a larger subscriber base to serve with customized devices provides the merged entity with (i) a more cost-effective per unit cost over which to distribute the incremental cost of providing the benefit and (ii) greater purchasing efficiencies and cost savings available as a result of greater volume. If the customization is a hardware customization such as a special physical button on a phone -- the example given in the Application -- that tends to have a significant cost for production because it impacts the manufacturer tooling, production, testing, product design, reliability, *etc.* Thus, the larger customer base allows for greater distribution of costs and volume purchasing, translating into better products and greater customization.

16. **To supplement the maps provided in the application, provide, in either GIS or MapInfo format, nationwide coverage maps,**

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including coverage of AT&T Wireless's and Cingular's affiliates, indicating AT&T Wireless's and Cingular's total coverage, cellular analog and digital coverage, TDMA coverage, GSM coverage, and UMTS deployment. All maps should be identically scaled.

See Exhibit II.16.

III. Additional Document and Data Request Regarding Wireless Services

Additional documents relevant to this section will be supplied under separate cover tomorrow.

1. **Provide all analyses including but not limited to Current Analysis, Telephia Reports, and National Service Assurance Reports related to market share or the competitive position of your actual and potential competitors.**

Cingular hereby certifies that the data and/or analyses most responsive to this question of the Information Request (i) are contained in response to Question 2 of Attachment A, Section III, *infra*, and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this question from among those documents produced to the DOJ.

2. [REDACTED]

3. **Provide all data and analyses that address the following:**
- a. **Market shares (however measured) or competitive position of AT&T Wireless and Cingular and any of their actual or potential competitors with respect to any relevant service in any relevant area.**
 - b. **Relative strengths or weakness of AT&T Wireless and Cingular and/or other companies providing or planning to provide any relevant service, including, but not limited to, any description or analysis of service offerings, advertising and marketing efforts, network quality (however measured), subscriber counts, market shares, gross additions, gross deactivations, net additions, or churn.**
 - c. **Loss of customers to other mobile wireless service providers and any strategies/attempts to win customers from other mobile wireless service providers or to stem losses to other mobile wireless service providers, including, but not limited to:**
 - i. **Churn data and any analyses or report thereof, including, but not limited to analyses on the correlation of churn with service quality, length of contract commitments, price, bundling with wireline service, or other factors;**
 - ii. **The effect on churn of wireless local number portability (LNP);**
 - iii. **Reasons for switching to or from AT&T Wireless and Cingular because of the absence or presence of particular services or service features; and**
 - iv. **AT&T Wireless's and Cingular's experience or success in obtaining customers through marketing or promotions targeted at particular mobile wireless providers, particular geographic areas, or particular types of customers (including but not limited to the offers made and the amount spent on the marketing effort, the number of new subscribers gained, average churn rates for such subscribers and revenues realized by AT&T Wireless and Cingular).**

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- d. How consumer or business customers view or perceive wireless services offered by AT&T Wireless and Cingular (including, but not limited to, the impact of bundling, offering services at a particular rate, the geographic scope of the service plan, the impact of not offering particular wireless services or the impact of pricing on decisions to take any relevant service, and the location and quality of AT&T Wireless's and Cingular's network).**
- e. Similarities and differences and consumer perceptions of similarities and differences between relevant services offered by AT&T Wireless and Cingular and those offered by their actual competitors.**
- f. Elasticities of demand, including own elasticities and cross-elasticities, for wireless services generally and for the relevant services offered by particular competitors.**
- g. Any actual or potential effect on supply, demand, cost or price of any relevant service as a result of competition from:**
 - i. Any new entrant, or**
 - ii. Any provider's other services, including but not limited to Wi-Fi, local telephone service, long distance telephone service, and Internet access service, regarded by customers as a potential substitute.**
- h. AT&T Wireless's and Cingular's planned or actual response to actual or potential competition in each relevant service within any relevant area.**
- i. The effect of wireless local number portability on AT&T Wireless and Cingular, their competitors, or on competition in any relevant service in any relevant areas and on competition for local telephone service, long distance telephone service, Internet access service or any combination of these services sold together or with any relevant service.**

Cingular hereby certifies that the data and/or analyses most responsive to this question of the Information Request and its subparts (i) are contained in Exhibit III.3 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this question and its subparts from among those documents produced to the DOJ.

4. **Provide all data and analyses that include, relate to, or address the following:**
 - a. **Price lists, pricing plans, pricing policies, pricing forecasts, pricing strategies, pricing analyses, and pricing decisions.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibits III.4 and II.5 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

- b. The design of pricing plans, including, but not limited to, estimation of relative sources of revenue (*e.g.*, monthly fees, roaming or out-of-region fees, overage fees), choice of the scope of the geographic service area, appropriate degree of geographic price discrimination and factors affecting the extent of geographic price discrimination, effectiveness of targeted promotions and the most effective forms of promotion.**

Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request (i) are contained in Exhibits III.4 and II.5 and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

- 5. State whether AT&T Wireless will be transferring to Cingular all ownership interests held in licensees (*e.g.* Triton and Cincinnati Bell) in which it holds less than a 50% interest ownership interest.**

Cingular Wireless Corporation is purchasing all of the shares of AT&T Wireless Services, Inc. As a result, Cingular Wireless Corporation will be acquiring all of the assets of AT&T Wireless Services, Inc., including minority interests held in licensees.

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6. **For each relevant service in each cellular market area (CMA), describe each price plan offered by AT&T Wireless and Cingular. Should service provided in a CMA include service provided by an affiliate, provide the requested data for the affiliate separately. For each price plan in each CMA, provide the following information:**
- a. **The date the plan was first offered, and if the plan is no longer available, the date new customers could no longer enroll for that plan;**
 - b. **The price terms of the plan including, but not limited to the number and type of minutes included in the basic monthly subscription fee for the service used within a specified geographic area, the charge for minutes used in excess of the monthly plan allotment, roaming charges for mobile wireless services used outside a specified geographic area and promotional minutes, discount or rebates;**
 - c. **Additional features included with the plan, including but not limited to voice mail, call waiting, unlimited night and weekend calling, rollover minutes, conference calling and push to talk;**
 - d. **The number of subscribers and mobile access numbers enrolled in the plan separately by type of customer (e.g., consumer, business, prepaid); this data should be provided for each month since January 1, 2002 and for each zip code in the CMA. Please provide your response in Microsoft Excel format.**
 - e. **The total monthly revenue, the average revenue per minute, average monthly usage and average revenue per customers of each plan, breaking out (1) subscriber fees; (2) roaming fees; (3) fees for minutes in excess of the plan allotments; (4) equipment fees; and (5) other fees (briefly describe); this data should be provided for each month since January 1, 2002 and for each zip code in the CMA. Please provide your response in Microsoft Excel format.**
 - f. **The length of the contract term of each plan and any fees associated with activation of service or early termination of the contract by customer;**

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- g. Any restriction on which types of customers that may enroll in any specific plan;**
- h. A detailed description of the geographic area(s) covered by the plan and any geographic restrictions or price differentials in a plan related to where a call originated or terminated;**
- i. The equipment needed by a customer to enroll in each price plan; the cost of the equipment and any equipment subsidies or discounts AT&T Wireless or Cingular provided to subscribers of each plan; and**
- j. Any discount received by a customer for enrolling in a price plan in combination with local telephone service, long distance telephone service, or internet access service offered by AT&T Wireless or Cingular, whether any of the services are to be provided solely by AT&T Wireless or Cingular or in conjunction with an agreement with any other provider.**

Cingular hereby certifies that the information most responsive to this subpart of the Information Request (i) is contained in Exhibit II.5 and (ii) was previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

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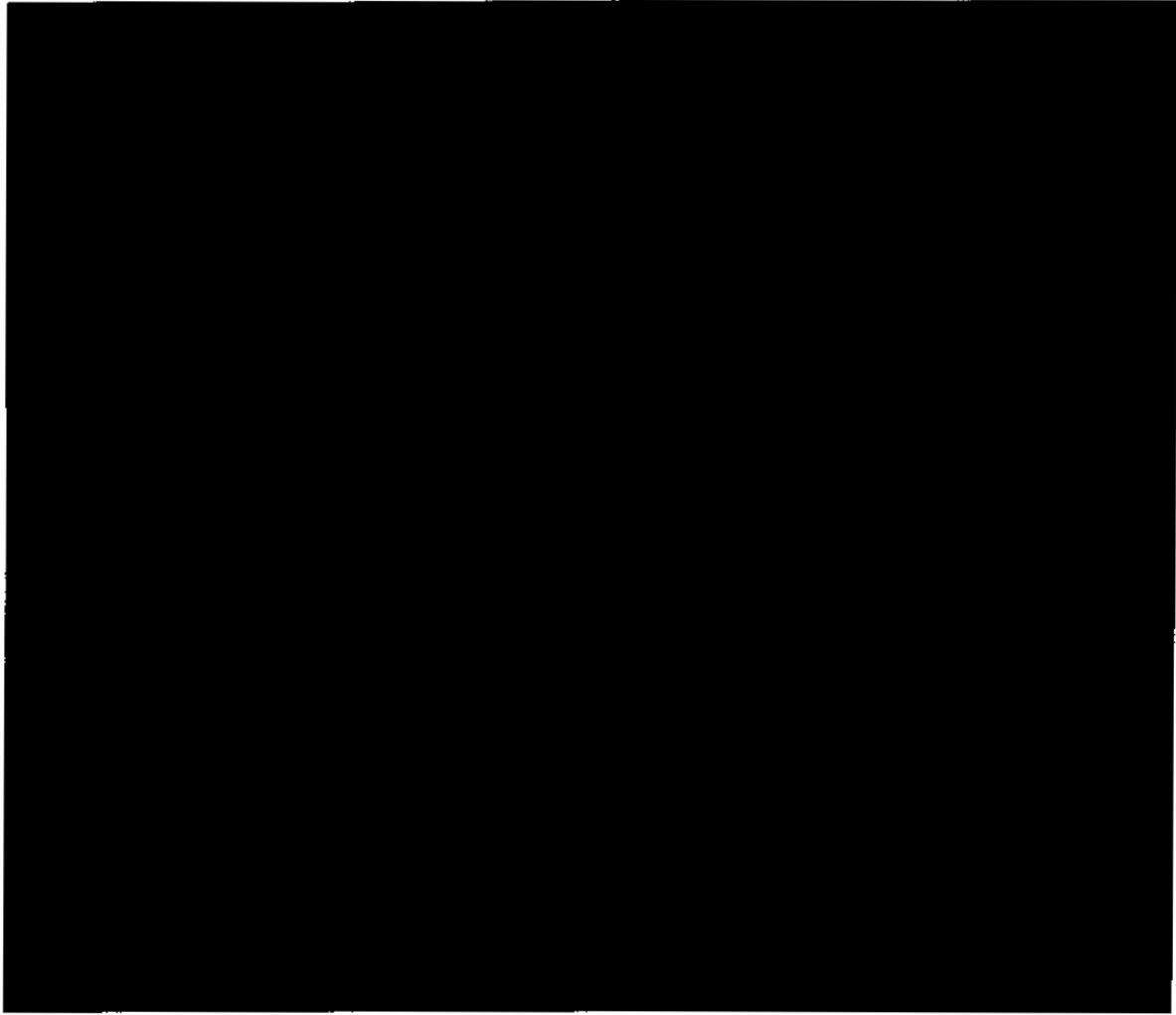
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Markets:

Geographic Description	Market Number	Market Name
CMA001	MSA001	New York, NY
CMA002	MSA002	Los Angeles, CA
CMA003	MSA003	Chicago, IL
CMA009	MSA009	Dallas-Forth Worth, TX
CMA004	MSA004	Philadelphia, PA
CMA005	MSA005	Detroit-Ann Arbor, MI
CMA010	MSA010	Houston, TX
CMA006	MSA006	Boston, MA
CMA008	MSA008	Washington, DC-MD-VA
CMA007	MSA007	San Francisco-Oakland, CA
CMA012	MSA012	Miami-Fort Lauderdale-Hollywood, FL
CMA017	MSA017	Atlanta, GA
CMA026	MSA026	Phoenix, AZ
CMA015	MSA015	Minneapolis-St. Paul, MN-WI
CMA018	MSA018	San Diego, CA
CMA011	MSA011	St. Louis, MO-IL
CMA020	MSA020	Seattle-Everett, WA
CMA019	MSA019	Denver-Boulder, CO
CMA035	MSA035	Sacramento, CA
CMA028	MSA028	Indianapolis, IN
CMA039	MSA039	Salt Lake City-Ogden, UT
CMA034	MSA034	Rochester, NY
CMA047	MSA047	Greensboro-Winston-Salem-High Point, NC
CMA040	MSA040	Dayton, OH
CMA071	MSA071	Raleigh-Durham, NC
CMA058	MSA058	Allentown-Bethlehem-Easton, PA-NJ
CMA077	MSA077	Tucson, AZ
CMA080	MSA080	Baton Rouge, LA
CMA092	MSA092	Little Rock-North Little Rock, AR
CMA084	MSA084	Harrisburg, PA
CMA088	MSA088	Chattanooga, TN-GA
CMA108	MSA108	Augusta, GA/SC
CMA112	MSA112	Corpus Christi, TX
CMA118	MSA118	Reading, PA
CMA171	MSA171	Reno, NV
CMA202	MSA202	Arecibo, PR
CMA222	MSA222	Tuscaloosa, AL
CMA207	MSA207	Jackson, MI
CMA253	MSA253	Sioux City, IA-NE
CMA282	MSA282	Bloomington, IN
CMA292	MSA292	Sherman-Denison, TX
CMA458	RSA458	Louisiana 5 - Beauregard
CMA458	RSA458	Louisiana 5 - Beauregard

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CMA560	RSA560	New York 2 - Franklin
CMA359	RSA359	Delaware 1 - Kent
CMA340	RSA340	California 5 - San Luis Obispo
CMA311	RSA311	Alabama 5 - Cleburne
CMA373	RSA373	Georgia 3 - Chattooga
CMA357	RSA357	Connecticut 1 - Litchfield
CMA441	RSA441	Kansas 14 - Reno
CMA632	RSA632	South Carolina 8 - Hampton
CMA392	RSA392	Idaho 5 - Butte
CMA697	RSA697	Washington 5 - Kittitas
CMA358	RSA358	Connecticut 2 - Windham
CMA369	RSA369	Florida 10 - Walton
CMA518	RSA518	Missouri 15 - Stone
CMA349	RSA349	Colorado 2 - Logan
CMA365	RSA365	Florida 6 - Dixie

7. Based on current resource allocation, provide:

- a. **The amount of spectrum, average per site and average per market, devoted to analog, TDMA,⁶ GSM, and UMTS.**

Cingular's response is provided in a spreadsheet found in a folder entitled 7(a) within Exhibit III.7.⁷ In understanding Cingular's response to this question, it is helpful to understand how Cingular allocates spectrum across various technologies.

Cingular uses many methods to allocate spectrum across the various technologies. In some cases the actual assignments or spectrum to be used is not known until a customer accesses the network. These types of solutions assign spectrum based on the

⁶ Based on the US Interim Standard 136, IS-136.

⁷ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City. [REDACTED]

current RF environment and provide spectral efficiencies far beyond the traditional fixed allocation methods.

Spectrum Deployment Methods

Analog:

Analog spectrum is allocated using tools that take advantage of known RF relationships between cells. These tools assign fixed spectrum to a site and are static in nature.

TDMA:

TDMA DCCH spectrum uses the same tools, and methodology to assign spectrum as analog. TDMA voice assignment methodology varies based on the features available from the infrastructure provider. Nortel, and Ericsson, systems use the same tools and methodologies to assign spectrum as outlined in the Analog section. In Lucent markets, Cingular employs a feature set called Flexible Channel Allocation (FLCA). This feature dynamically assigns channels based on the radio environment of an allocated pool of frequencies.

GSM:

In most Cingular markets, 12 consecutive BCCH frequencies are deployed. In the older GSM only markets, an AHDHOC system was implemented using Automated Frequency Planning (AFP) tools. GSM systems typically use a common hopping pool approach across all sectors. In these markets, the same spectrum is used across all three sectors of a site, and more commonly an entire network.

Markets that support only GSM, however, may have opted for an alternative plan. These plans typically divide spectrum into three main groups and assigns one group to all

the alpha sectors, one to all the beta sector, and one to gamma sectors. In other markets, ADHOC method of assigning hopping plans is employed.

b. A break down of GSM voice, GPRS, and EDGE spectrum allocations.

At this time, Cingular does not allocate spectrum solely for data purposes.

Cingular uses time slots in the BCCH layer or hopping layer for data. Because of this approach, supplying spectrum allocation voice vs. data is not possible at this time

c. Include, in the response to the requests above, detailed data used in this computation, such as the average number of frequencies per sector based on cell-by-cell basis, the average number of frequencies per site, and the number of sites per market.

Cingular's response to is set forth in a spreadsheet in a folder entitled 7(c), which is found in Exhibit III.7.⁸

8. Based on switch and other measured data, and for each one of the deployed technologies, analog, TDMA, GSM, and UMTS, provide the values for the following metrics, or other company and industry standard metrics, at peak hour and on an average monthly basis:

a. Blocked calls as a percent of offered calls, including origination and termination failure;

Cingular's response is found in a spreadsheet in Exhibit III.8.⁹

⁸ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City. [REDACTED]

⁹ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City. [REDACTED]

b. **Dropped calls and hand-off failures percentages;**

Cingular's response is found in a spreadsheet in Exhibit III.8. Note that Cingular Wireless's drop call formula already accounts for the handover failures and that Cingular is unable to provide handover failure separately.¹⁰

c. **Switch loading or utilization, including total processed calls to total capacity per unit time and percent of back plane and port utilization;**

An Excel spreadsheet is attached as Exhibit III.8 and contains the following information for Cingular Wireless switches (including AMPS, TDMA, GSM, or GSM Gateways):

- **Percent Switch CP Load** – This represents the current load of the critical Computer Processing (CP) unit for Ericsson and Nortel MSCs only. This does not apply to Lucent MSCs because the CP units are modular and can be upgraded or expanded as needed. This does not apply to Nokia MSCs because they have distributed architecture which means the switch load is distributed among different CP units.
- **Percent Switch Load/Utilization** – This represents the current switch load including processed calls versus the total switch capacity. Each switch vendor has its own capacity limiting metric which is described as follows:

Lucent TDMA = Voice Channel Allocation (VCA)
Nokia GSM = Erlang
Ericsson = Erlang
Nortel = Busy Hour Call Attempts (BHCA)

¹⁰ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City.

- **Percent Port Utilization** – This represents the current DS1/T1 ports in-service versus the total DS1/T1 port capacity of the switch.

In general, it should be noted that Cingular has assumed that AWS traffic volumes and network configurations are the same or similar to Cingular's traffic volumes and network configurations. If that is the case, which, due to antitrust limitations, Cingular will not be able to confirm until the consummation of the merger, the acquisition of AWS is expected to reduce the amount of required network elements (MSCs, BSCs, and ("TRAUs")) [REDACTED] due to the elimination of redundant network equipment and by more efficient use of existing network equipment (less overhead per element). Because AWS and Cingular have utilized and are utilizing the same TDMA/GSM wireless standards and what appears to be a similar evolution path to third generation technology, Cingular's network elements which experience high utilization can be load balanced with AWS's network elements. This approach will effectively and efficiently utilize nodes permitting optimal use of the capacity available.

d. Average Erlangs per cell site on a per-site and per-market wide basis;

Cingular's response is found in a spreadsheet in Exhibit III.8.¹¹

e. Percent of the time active traffic is present on a cell site.

Cingular's reporting systems are not currently set up to report this metric as defined. However based on our understanding of the question, which requests

¹¹ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City. [REDACTED]

information on a peak hour and an average monthly information, the answer is as follows:

Peak Hour: During the 'Peak hour of any cell site, there is inherently traffic on the cell, hence the peak hour. Therefore, the percent of time traffic is present on any given cell during the peak hour would be 100%

Average Monthly: During a month, the average utilization also ends up being a 100%. Meaning that out of 30 days there is always traffic in a any of the 24 hours of a single day, resulting in an always "ON" state.

9. **For all data gateways,¹² provide peak-hour loading and monthly averages while distinguishing between cellular digital packet data, CDPD, TDMA, GSM, and EDGE for the following metrics, or other company and industry standard metrics, at peak hour and up link separately, averaged on a cell-by-cell basis and a market-wide basis. Additionally, estimate:**

The primary data service offering in the Cingular network is GSM GPRS. In the Cingular network, GGSN nodes are deployed [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹² The data gateways will include serving GPRS support node, SGSN, and gateway GPRS support node, GGSN, and any inter-working function gateways.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- a. **The residual available data capacity, in both kbps and effective average bandwidth (MHz) on a cell-by-cell basis and on a market-wide basis;**

Responsive data is found in Exhibit III.9.¹³ Cingular Wireless is providing the per sector maximum timeslot throughput in kbps. Cingular's equipment vendors currently do not have a method to determine the residual data capacity in kbps. GSM supports 50 RLC MAC Blocks / Timeslot, which is the transmission rate of GPRS on a per timeslot basis. Note that a low throughput number indicates C/I problems.

- b. **The CGSN and GGSN capacity and port utilization;**

The primary data service offering in the Cingular network is GSM GPRS. [REDACTED]

[REDACTED]

[REDACTED]

¹³ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City. Reading and Washington are not available because of problems in the software used to gather the data. New York City is not available because of issues in getting the data from T-Mobile, Cingular's joint venture partner. Cingular expects the data from these three markets to be available shortly and will supplement its production at that time. In addition, in areas using the Nokia network, EDGE performance statistics are not able to be reported separately from GPRS performance statistics. Although Cingular has an outstanding request to Nokia to fix the issue, Nokia has not provided a delivery date.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. Values of quality of service metrics for packet switched data systems including, but not limited to:

i. Success of session initiation and termination;

The primary role of the GGSN (Gateway GPRS Support Node) is to serve as an interface between the SGSN (Serving GPRS Support Node) and an external IP packet network.

The main role of the SGSN is to forward incoming and outgoing IP packets between the Base Station Subsystem (BSS) and the Gateway GPRS Support Node (GGSN). The SGSN provides the Packet routing and transfer to and from the SGSN area, authentication and ciphering and mobility management.

The SGSN serves all GPRS subscribers that are physically located within the geographical SGSN area. A GPRS subscriber may be served by any SGSN in the network, all depending on location. The traffic is routed from the SGSN to an MS through a BSS.

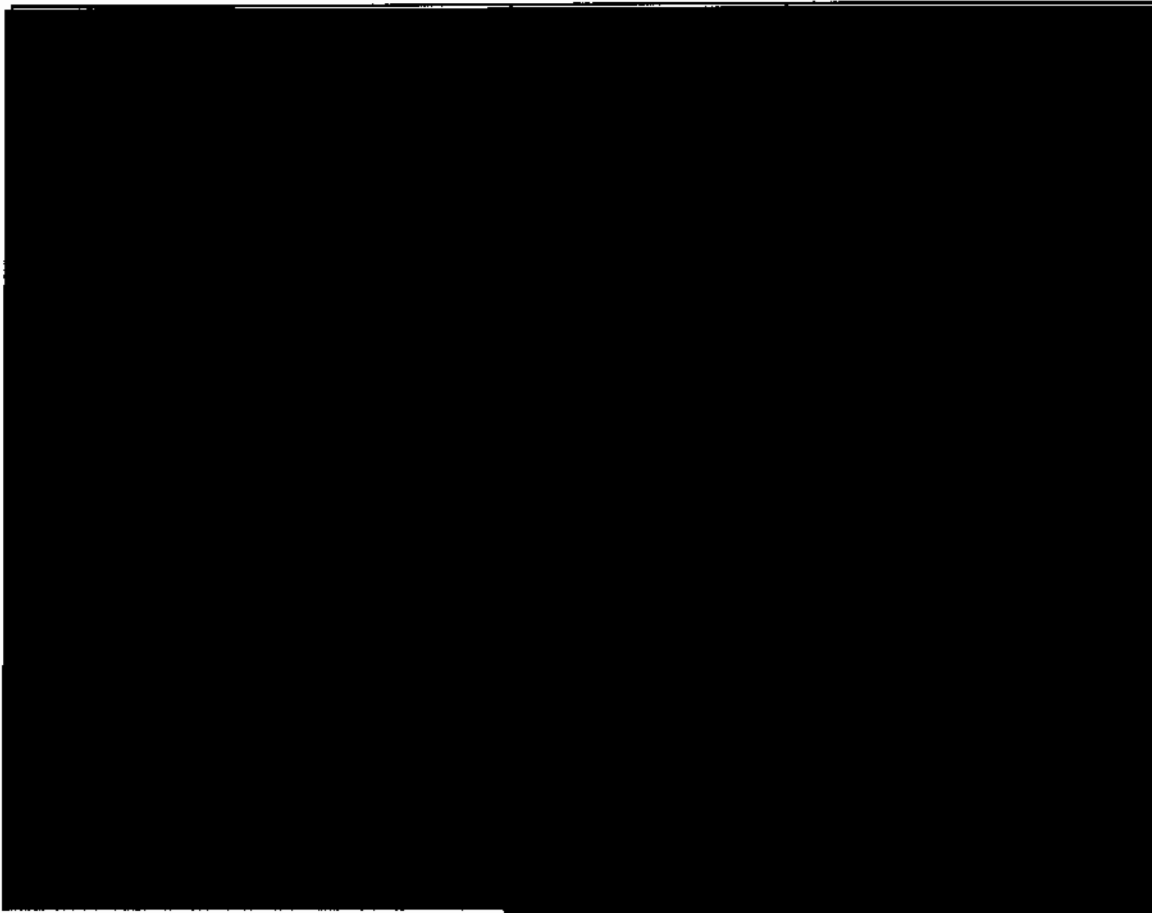
The Cingular SGSN nodes are deployed in four Cingular defined regions – Northeast, Midwest, West and South region. Because the SGSNs serve multiple markets within a region and data usage traffic is aggregated by regions. The primary SGSN usage drivers in the Cingular network are Simultaneous Attached Users (SAU) and Session (Active PDP_Context).

The primary SGSN usage drivers in the Cingular network are Simultaneous Attached Users (SAU) and Session (Active PDP_Context). [REDACTED]

[REDACTED]

[REDACTED]

Additional information about SBSN usage is set forth in Exhibit III.9.





Cingular continues to offer TDMA CSD in the all markets with the exception the CA, NV, WA, NC and SC, which are GSM only markets. The TDMA CSD IWF units are collocated with the TDMA MSC.

ii. Bit error rate on both down link and up link;

Responsive data is found in Exhibit III.9.

iii. Average served number of users on a per-cell basis and on a system-wide basis.

The only way to determine that a user was “served” is a successful PDP context activation, which is measured at the SGSN. SGSN metrics are only able to measure across multiple markets within a network; per cell counter information is not available in the SGSN.

10. **Provide all assumptions that lead to the requirement of 20 MHz to achieve GSM 10x analog efficiency. The assumptions**

should include, but are not limited to, the number of time slots and frequency channels dedicated to voice, packet and control systems, number of voice, packet, and control channels per sector, reuse distance, average cell site radius for urban, suburban, and rural areas, the number of frequency groups, the average number of subscribers per cell and per market, the average data rate (down link and uplink) as well as the number of Erlangs per subscriber for voice and data applications, separately. Provide data for both 850 MHz and the 1.9 GHz bands, separately. Demonstrate that with 20 MHz of spectrum using GSM technology that AT&T Wireless, Cingular, and/or the merged company will meet or exceed the GSM services requirements for the above noted markets based on current and future needs through 2007.

As discussed in the Public Interest Statement and the declaration of William Hogg and Mark Austin, Cingular's principal objectives in pursuing the merger with AT&T Wireless are to improve the quality of existing voice and data services, accommodate the expected growth in today's services, and to provide sufficient spectrum to allow the widespread offering of advanced 3G services. To achieve these objectives, the combined company will take advantage of the efficiencies that result from integrating the two companies' separate networks and from transitioning analog and TDMA subscribers to the more efficient GSM technology. As explained below, in areas where the merged company will have 80 MHz of spectrum, it will be able provide improved service in only 50 MHz after exploiting these efficiencies, making 30 MHz available for the competitive provision of high-speed 3G services.

These efficiencies, while significant, are not boundless. In addition, some of the efficiencies possible with GSM technology will not be available in the network at the time of initial integration due to the need to continue to support analog and TDMA networks, so the actual deployed network will be less efficient than the theoretical

maximum. Moreover, as explained in the response to Request II.2, Cingular will not be in a position to flash-cut all subscribers to GSM concurrently with the rationalization and integration of the two companies' networks.

Cingular will take direct advantage of the efficiencies resulting from network integration not only to improve quality and increase capacity, but also (where possible) to accommodate existing subscribers in less spectrum. Where the two companies are currently using in excess of 50 MHz to serve subscribers, the combined network should be able to accommodate those customers within 50 MHz, which will allow spectrum above that amount to be used for UMTS. Thus, in markets with 80 MHz, 50 MHz will be used for GSM/GPRS/EDGE (as well as TDMA and analog, initially), and the remaining 30 MHz will allow Cingular to engage in a major deployment of UMTS, with three 10 MHz blocks of spectrum permitting large-scale, high-speed wireless data usage. Where the companies have less than 50 MHz, the networks will initially be combined to use all of the spectrum available.

In the sections below, Cingular explains the assumptions underlying the assertion that the maximum efficiency level of GSM is 10 times that of analog service and analyzes the amount of "headroom" that would result if it were possible to flash-cut subscribers to GSM at the same time as the networks are integrated. It is readily apparent that even with 50 MHz, the headroom is short-lived. It will permit Cingular to increase capacity and improve service quality, but it will still be necessary to continue capacity expansion through network improvements, technological advances, and other means. The headroom, at best, is sufficient to accommodate the additional demand resulting from [REDACTED]. Cingular simply cannot accommodate all of the

combined company's customers' GSM capacity needs throughout the network in 20 MHz of spectrum.

A. The Assumptions Leading to the Conclusion That GSM Achieves a Peak Efficiency of 10× Analog with 20 MHz of Spectrum (or Multiples Thereof)

The declaration of William Hogg and Mark Austin stated that the efficiency of GSM could be up to "10× that of analog," its "maximum level of efficiency," when 20 MHz of spectrum is devoted to GSM. Hogg-Austin Declaration at ¶¶ 10, 28; *see also id.* at ¶ 33. That assertion was based on a comparison of theoretical spectral efficiency, *i.e.*, the relative number of simultaneous subscriber voice communications possible per MHz with GSM vs. analog. The analysis is set forth below. Because this analysis was based on a theoretical network and the systems in the field can only approach theoretical efficiencies (due in part to difficulties in obtaining ideal site locations), the actual efficiency of Cingular Wireless's existing GSM network and of the GSM network of the merged company will likely be less. As a practical matter, therefore, the combined company will need more spectrum than required if the theoretical efficiencies could be achieved.

In comparing GSM efficiency against analog, Messrs. Hogg and Austin assumed the GSM network used a unique paired 200 kHz control channel per sector with three sectors per site in a four-cell reuse pattern for the Broadcast Control ("BCCH") channels (*i.e.*, there are twelve BCCH channels, each of which is used only at one sector in every four cells) for every 20 MHz of spectrum (or portion thereof) allocated to GSM service. The balance of the allocated spectrum is used for paired 200 kHz channels in a 1/1 hopping reuse pattern used commonly at every sector. (At 20 MHz, there are 12 paired

200 kHz control channels and 38 paired 200 kHz hopping channels). To achieve up to the 10× increase in capacity, a variety of advanced GSM features need to be employed as shown in Figure 1:

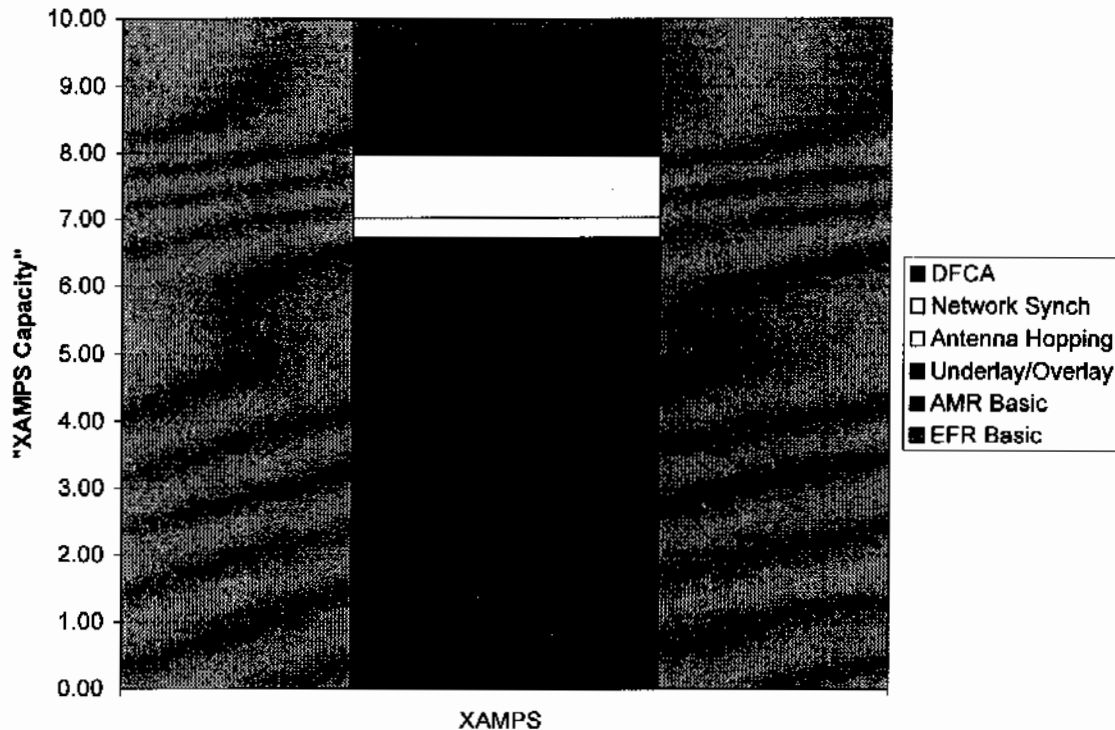


Figure 1: Assumptions behind GSM 10× AMPS (Analog) capacity

EFR: Enhanced Full Rate Vocoder. GSM with EFR only, and none of the other enhancements discussed below, is about 3.4 times more spectrally efficient than analog.

AMR Basic: Adaptive Multirate Vocoder. AMR is a generation beyond EFR and allows the network to select the most efficient codec rate (*e.g.*, 12.2 kbps, 7.95 kbps, 5.9 kbps) for a given communication on a dynamic basis in light of signal quality and other

conditions. The basic use of AMR alone (*i.e.*, without the other enhancements discussed below) results in six times the spectral efficiency of analog.¹⁴

Overlay/Underlay. This involves creating a smaller “virtual” cell within a given cell. The smaller cell carries a significant portion of the cell’s traffic near the base station, which can operate under high spectral efficiency since the mobile’s signal strength is always good. This enhancement is currently in use in several Cingular networks.

Antenna Hopping. This is a technology where the base station “hops” its transmission between two transmit antennas at a given sector every other GSM burst. This assists in mitigating the fading towards the mobile. This feature is in the GSM vendor roadmaps, but not in Cingular’s networks currently in any large scale.

Network Synch. This involves synchronizing the base stations so that a given time slot transmitted is aligned so that it overlaps only one other timeslot (rather than two) from any other base station transmitter. This feature is in the GSM vendor roadmaps, but is not currently used in Cingular’s networks.

DFCA: Dynamic Frequency Channel Allocation. This is a proprietary GSM feature announced by, but not yet available from, Nokia that optimally assigns the hopping frequency offsets to mitigate interference, when Network Synch is employed.

¹⁴ EFR codecs were used in the first GSM systems deployed in the United States, while more recent GSM networks have included the more efficient AMR technology. Achieving the full efficiency gains of AMR depends on a high proportion of mobile units being AMR-capable. Most Cingular networks are AMR-equipped, and the company has sold only AMR-capable mobiles for several years. Nevertheless, only a small proportion of the handsets on Cingular’s original 1900 MHz GSM networks are AMR-capable. Eventually, as customers upgrade their handsets in those systems, the networks will become able to take advantage of this technology’s increased efficiency.

As will be apparent from Figure 1, the features deployed in Cingular's network today — AMR, EFR, and Overlay/Underlay — can produce an efficiency increase of up to about 7× over analog. Nevertheless, this 7× increase applies only for 100% AMR systems. Since the AT&T Wireless GSM systems were launched before AMR, the combined company will inherit a significant number of older vintage EFR-only mobiles, and thus early integration capacity may be limited to significantly lower than 7× that of analog.¹⁵ By adding Antenna Hopping, Network Synch, and DFCA, the theoretical efficiency of GSM could be increased to about 10× that of analog technology.

These relative efficiencies assume that 20 MHz (or a multiple thereof) is devoted to GSM. As noted above, the number of control channels is fixed for every 20 MHz, or portion thereof, that is used for GSM. Therefore, such a network is most spectrally efficient at 20 MHz (or a multiple thereof) where the control channels occupy the smallest proportion of the available spectrum, leaving the most room for customer traffic.¹⁶ When less than 20 MHz of spectrum is used, the network's relative spectral efficiency will be lower; the efficiency comes from maximizing the pool of hopping channels used at all sites, and below 20 MHz a higher percentage of the spectrum will be devoted to the 12 BCCH channels, which is less spectrally efficient than 1/1 hopping. When the amount of spectrum is increased over 20 MHz,¹⁷ additional dedicated channels

¹⁵ This is a nonlinear effect, so that capacity loss is greater than the percentage of EFR-only mobiles. For instance, if 25% of the mobiles were EFR-only, the efficiency advantage would be reduced by more than 25%, from about 7× analog to about 4× analog.

¹⁶ At 20 MHz, there are 12 paired 200 kHz BCCH channels (one unique BCCH channel for each sector), and the remaining 38 paired 200 kHz hopping channels are reused in all sectors of all sites.

¹⁷ Even within 20 MHz, other channels must be dedicated to signaling, which are ignored for purposes of the present analysis.

should be used to support signaling, which will initially reduce efficiency, until the total amount of spectrum is increased to 40 MHz.

This conclusion assumes that, for purposes of comparison with analog service (which does not support data services), all channels are used for voice traffic, with no channels or timeslots set aside for GPRS or EDGE data. In addition, time slots that would normally be used for control purposes (*e.g.*, stand-alone dedicated control (“SDCCH”) channels) were ignored as a simplifying assumption; in reality, a limited number of SDCCH channels will be allocated from among the timeslots on hopping channels, decreasing the number of timeslots available for voice traffic and thus diminishing efficiency slightly. The efficiency computation also assumes that adequate coverage exists between cell sites, which typically means [REDACTED] [REDACTED] for “in-vehicle” traffic, [REDACTED] for “suburban in-building” traffic, and [REDACTED] [REDACTED] for when “urban in-building traffic” is served. Additionally, it was assumed that cell sites’ coverage is optimal with respect to handoffs to first-tier neighboring cells.

In response to the inquiry, no assumptions were made concerning the number of subscribers per cell or per MSA/RSA or the number of Erlangs per subscriber, as the efficiency computation was a comparison of theoretical spectral efficiency. The computation also does not depend on whether the 850 MHz or the 1.9 GHz band is used.

Because the limiting factor is the requirement for a single dedicated set of GSM control channels, the efficiency comparison between GSM and analog applies to service using either of these bands exclusively, provided that the signal strength requirements above are satisfied. It also applies to service using a combination of both bands to

achieve 20 MHz, assuming that the cell layout permits both bands to be used at the same locations consistent with the signal strength standards above and that all subscriber handsets are dual-band units capable of using a single control channel for both bands so that separate control channels would not be required for each band.¹⁸ Dedicating control channels in both bands will reduce spectral efficiency to $8\times$ AMPS in 20 MHz service areas, since only 26 200 kHz paired frequency channels will be available for 1/1 hopping.

No specific assumptions were made concerning reuse distance, average cell site radius for urban, suburban, and rural areas, number of frequency groups, average number of subscribers per cell and per service area, the average data rate (downlink and uplink), or the number of Erlangs per subscriber for voice and data applications.

B. Headroom for Future Growth

The Commission requested that Cingular demonstrate how, with GSM technology, 20 MHz of spectrum will allow the merged company to “meet or exceed the GSM services requirements for the above noted markets based on current and future needs through 2007.” This request is premised on the assumption that 20 MHz would permit the company to serve its combined customer base using GSM technology at an acceptable service quality level. As demonstrated herein, however, this is not the case. Indeed, based upon the MoU growth experienced within the wireless industry recently of 30% per year, it is unlikely that 50 MHz, much less 20 MHz, of spectrum will permit the merged company to meet or exceed its GSM service requirement through 2007 in service

¹⁸ In practice, many Cingular Wireless networks dedicate two control channels when two bands are used, so as to be able to capture 1900 MHz roaming traffic, because other carriers’ 1900 MHz-only subscriber handsets cannot utilize a control channel in the 850 MHz band.

areas where Cingular and AT&T Wireless both have existing customers, without taking further steps to increase capacity on a continuing basis.¹⁹

The relative performance of the current network is the starting place for determining the amount of growth capacity the merged company will have while maintaining prescribed quality targets. Several metrics are typically used to measure performance: dropped calls, blocking, and bit-error rate or frame error rate. A quality GSM network needs to meet the following metrics: (a) dropped calls [REDACTED], (b) blocking/sector in sector busy hour [REDACTED], and (c) a bit error-rate [REDACTED].

While integrating the two networks will give the combined company some additional headroom initially, that headroom will be exhausted quickly by the merged company's need to improve network quality, to support three networks (analog, TDMA, and GSM) and to meet growth in demand. In order to determine the maximum potential headroom which the merger might provide, Cingular analyzed the additional capacity the merged company would achieve using a series of assumptions. The results are demonstrated in Figure 2 for a hypothetical "best case" system in which both Cingular and AWS hold 25 MHz of spectrum. The assumptions used in preparing that figure were as follows:²⁰

¹⁹ As discussed below, Cingular plans to take such steps.

²⁰ Cingular was required to employ these assumptions in large part because, for antitrust reasons, it does not have, and cannot gain, access to the details of AT&T Wireless's networks, usage, service quality, *etc.*, until after the merger is approved. Given that the Commission is seeking to determine whether the combined company's operations could be accommodated within 20 MHz, the most conservative assumption regarding analog and data service is to ignore these services, which consume much less spectrum than is consumed by digital voice service, and assume that all of the spectrum under consideration is used for GSM (and assumes all TDMA use has been transitioned to GSM). With respect to the time period for integration, Cingular believes that, as a general matter, the integration of the networks in a given MSA/RSA can be accomplished within about one year; for present purposes it is assumed that all such

- (a) AT&T Wireless's and Cingular's usage/MHz information is the same;
- (b) the service quality of the two networks is comparable and in keeping with the performance metrics above;
- (c) the networks provide only voice service; no data demand is included;
- (d) no capacity is needed for analog service; and
- (e) the two networks can be fully integrated within a year.

Based on those assumptions, the blue line in this graph, represents the projected total demand for busy-hour GSM minutes of use ("MoUs") of the two networks over the next five years. The pink line represents the projected TDMA demand converted into additional equivalent GSM MoUs over the same period. Adding these together yields the yellow line, representing the total projected demand for GSM and GSM-equivalent MoUs on the two networks. The red line represents the capacity of the combined network after integrating the two networks as they now exist into a single, more efficient GSM network. As the figure illustrates, the integration of the two networks in the best case could provide a significant increase in capacity²¹ — but that increase in capacity will be consumed by the additional demand that is expected within less than two years because of normal growth.²²

integrations networks will be accomplished within a single year, including scaling down the total spectrum of networks being combined to 50 MHz, where a total exceeding 50 MHz is currently used by Cingular and AT&T Wireless. It is unclear whether the spectrum reduction will actually be accomplished in that short a time, given the potential adverse effect on service quality as discussed below.

²¹ Because of the assumptions on which Figure 2 is based, the merged company is unlikely to be able to achieve the projected increase in capacity since it will be required to support analog service and some capacity is needed for data services.

²² Since the calculations underlying Figure 2 assume the spectral efficiency of GSM for both GSM and TDMA MoUs, a flash cut of all the combined TDMA customers to GSM would not change the results, assuming that it were possible to achieve such a flash cut. Cingular's experience in attempting to migrate customers from analog to digital indicates that some customers are reluctant to give up their existing phones, even when free, new units are offered. The reasons why a flash cut is not feasible are discussed in the response to Request II.2.

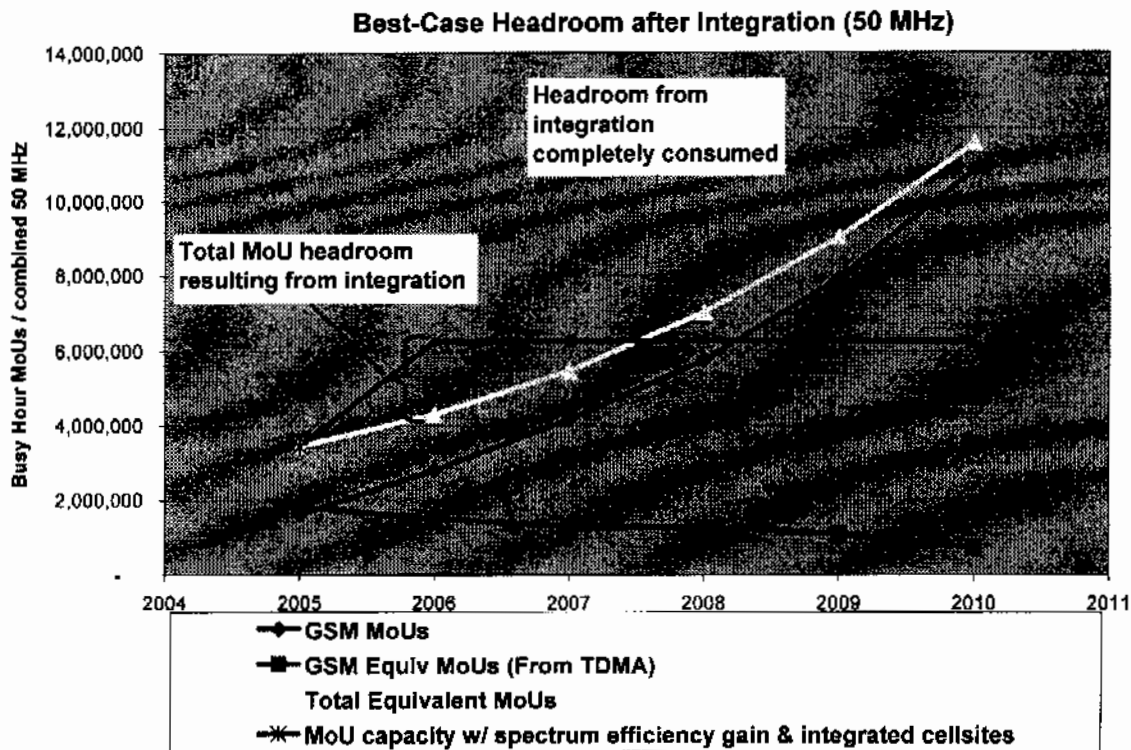


Figure 2: Maximum Headroom Resulting from Combining Networks and Conversion from TDMA to GSM

In this example, by integrating the two networks during 2005 and completing the work by the beginning of 2006, the combined company in this best case scenario will achieve additional capacity of approximately 2 million MoUs through the efficiencies discussed in the original declaration. Nevertheless, assuming that demand continues to increase at the current rate of 30% per year, the merged company will require even more capacity by mid-2007. As a result, even with up to 50 MHz for voice traffic alone, the combined company would be required to add spectrum, engage in network improvements, continue to develop capacity enhancement techniques, and look to additional new technology solutions shortly after the systems are integrated to keep up with MoU growth. In addition, the increasing demand for 2/2.5G data service will

accelerate the need for the merged company to continue expanding capacity. For instance, a dedicated EDGE channel in 4/12 reuse will require 5.2 MHz. Hence, the merger will not allow the merged company to rest on its laurels and avoid the kinds of network improvements Cingular has undertaken to date and its competitors are required to undertake.

Moreover, much of the capacity coming from integration and GSM conversion would be immediately needed in many areas to improve service quality, as will be discussed below. Any potential headroom may also be eaten up by the existence of less robust EFR mobiles as noted above. In short, the “headroom” — *i.e.*, the additional network capacity — that would result from the rapid integration of the networks and their wholesale conversion from TDMA to GSM would not make it possible for the network to be operated with substantially less spectrum. It would simply allow the integrated network to improve capacity and service quality more rapidly.

In a number of major metropolitan areas, most or all of the headroom will immediately be consumed by improving service quality to industry-standard levels, which directly benefits customers. Looking only at the dropped call metric for sake of simplicity, in some cases the headroom achieved by the integration of the two networks will be sufficient to address service quality issues and little more, even if the networks were converted entirely to GSM. Figure 3, below, illustrates how the merger and integration of the networks will affect the percentage of dropped calls for a representative sample of the service areas requested by the Commission, assuming no system

improvements other than integration of the two networks.²³ The maroon bars represent the percentage of dropped calls on the networks prior to integration, while the blue bars depict the percentage of dropped calls immediately after integration.

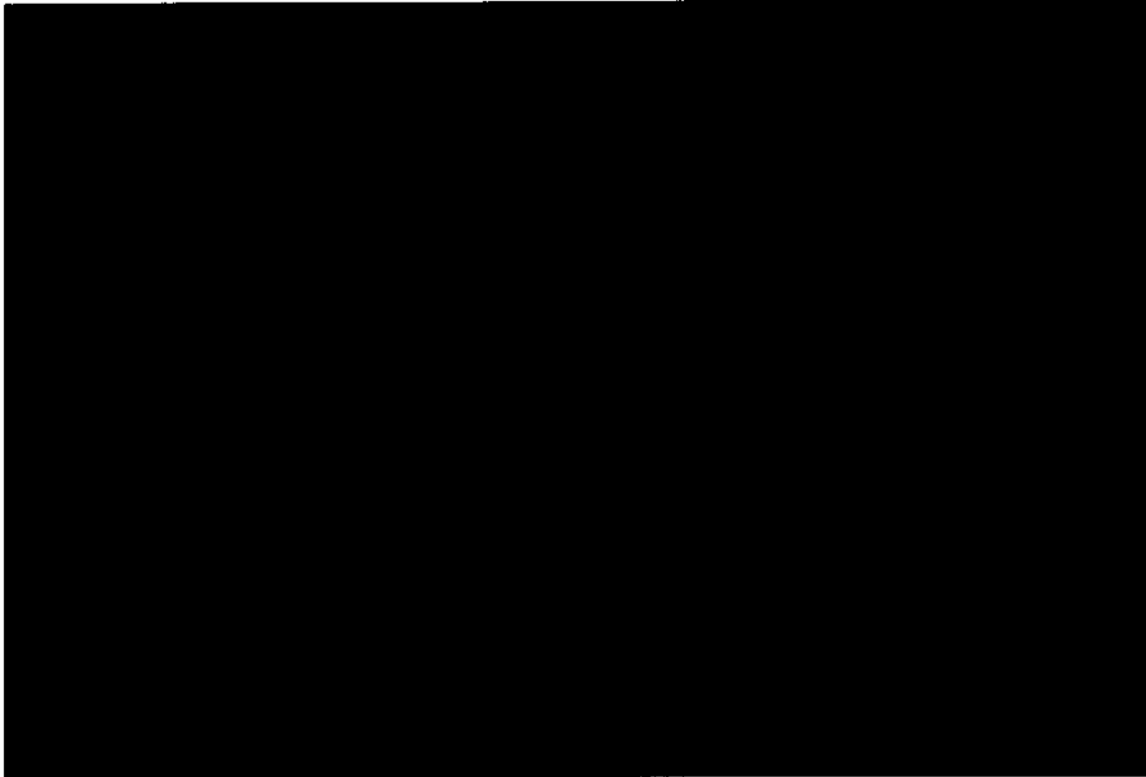


**Figure 3: Effect of Merger on Service Quality (% Dropped Calls),
Assuming the Lesser of the Actual Spectrum of the Merged Networks or 50 MHz.**

To the extent the combined network in a given area has [REDACTED] dropped calls, it would potentially have the capacity to carry additional traffic for a period of time

²³ Cingular is compiling charts corresponding to Figures 3 and 4 for the remainder of the 57 networks requested that Cingular currently operates (some are currently AT&T Wireless-only) and will submit a filing with charts covering these networks as a supplement in the near future. The data used to prepare these charts is as of the date of the application filing (actual recent numbers may vary). For these charts, Cingular has assumed that AT&T Wireless's networks are configured identically to Cingular's and that the two networks perform equally, because Cingular does not have, and cannot have, access to AT&T Wireless's data due to antitrust limitations. For this reason, Cingular is not preparing charts for MSA/RSAs served only by AT&T Wireless. The dropped call reduction was estimated from the graph provided as Appendix 4 to the Hogg-Austin Declaration.

without further network improvements. Figure 4 shows this “headroom” as the percentage by which the network beats the dropped call objective.



**Figure 4: Headroom Beyond [REDACTED] Dropped Call Metric,
Assuming the Lesser of the Actual Spectrum of the Merged Networks or 50 MHz.**

In [REDACTED] where the integration produces spectrum “headroom,” that additional capacity is likely to be utilized in part to improve service quality. In [REDACTED], however, including many where the total amount of spectrum used for GSM is assumed to be reduced from over 50 MHz to 50 MHz, there is [REDACTED]. The charts would appear to suggest that [REDACTED] [REDACTED]. This results, in large part, from the simplified assumptions underlying the chart. [REDACTED]

█ the merged company will undoubtedly manage the actual integration of the networks to avoid degradation in service quality.²⁴

This discussion of headroom assumes that the amount of spectrum for the combined system will provide GSM service using all of the spectrum currently used by both networks for both GSM and TDMA, without freeing up any spectrum for other uses, up to a maximum of 50 MHz. In other words, the analysis did not assume that the amount of spectrum for GSM service would be reduced to 20 MHz, as Request III-10 appears to suggest. Indeed, since this analysis assumes more than 20 MHz was available post-merger, and the performance of the systems with *more* than 20 MHz of spectrum was typically not adequate to accommodate the two networks' existing customers and normal growth through the end of 2007 without adding either spectrum or assumed technology or techniques based capacity enhancements, it is readily apparent that the headroom resulting from network integration, even with a complete conversion to GSM, would not permit the combined customer base to be served in only 20 MHz (except, of course, where the existing networks occupy only about that much spectrum today).

Further, if Cingular attempted to reduce the amount of spectrum to 20 MHz for GSM, its service quality for its existing customers and projected demand, would deteriorate to unacceptable levels in many areas. When mapping dropped call headroom to a spectrum *decrease* (e.g., using a total of 50 MHz for GSM instead of the companies' combined spectrum exceeding 50 MHz, or the more extreme case of reducing the total

²⁴ The transition will be planned in detail only after Cingular has access to granular data concerning AT&T Wireless's networks, which will permit a more carefully tailored transition plan to the circumstances of a particular service area. For example, the reduction in spectrum to 50 MHz could be phased in over a more extended period than is assumed here. Other measures, such as accelerating the introduction of GSM efficiency improvements and increasing the density and number of cells during the transition, will also be examined.

spectrum to 20 MHz, as the Request appears to envision), Cingular's experience indicates that [REDACTED] spectrum can result in [REDACTED]

[REDACTED]. In sum, the merged company will require the combined spectrum of both Cingular and AWS over the near term, *i.e.*, by about 2007, in order to achieve the service quality and growth objectives which were the principal reasons for pursuing the merger.

11. **Provide the percent voice traffic versus data traffic on both TDMA and GSM systems. Distinguish between GPRS and EDGE. Provide this data since the inception of GPRS and EDGE technologies and the anticipated projection of both voice and data traffic through 2007. Provide the percent of GPRS and EDGE coverage²⁵ to that of TDMA voice and GSM voice coverage separately in each area. Provide GPRS, EDGE, and UMTS build-out plans through 2007.**

Cingular Wireless tracks billable voice (MOU) and data (megabyte). Billable MOUs and Megabytes of data cannot be directly compared from a traffic perspective. Typically, conditions such as interference, and loading impact throughput from a capacity perspective. For example, the better the interference conditions, the better the throughput.

Cingular has provided a forecast of voice MOUs and data through December 2005 in a folder entitled 11, in spreadsheets entitled voice MOU forecast and data forecast. These spreadsheets are found within Exhibit III.11.

²⁵ Coverage, as referenced in this document, should be based on market-specific, field-adjusted propagation models and reflect -95 dBm signal level. Contours in GIS or MapInfo format depicting the edge of the cell coverage area are to be provided.

Please note, that Cingular does not forecast Subs, MOU's or Data on a MSA level. The Subs and MOU's forecasts are on a sub market level, while the Data forecasts are at the Executive Director level. Also please note that Cingular only forecasts through December 2005. Therefore forecast data for 2006 and 2007 are not available.

Cingular Wireless has 100% data coverage, and supports two dedicated timeslots per sector. These two timeslots are used for both GPRS and EDGE. Cingular Wireless data is billed on a kilobyte basis, and there is not a direct comparison with voice MOUs.

The percent of GPRS and EDGE coverage to TDMA and GSM voice coverage for each of the markets listed is depicted in the spreadsheet below. GSM and TDMA coverage, in markets where both are deployed, are similar. GPRS is deployed in all GSM cell sites and is equal to GSM coverage. EDGE is deployed in all GSM cell sites with the exception of markets where Nortel infrastructure is deployed, (North Carolina, South Carolina, East Tennessee and Puerto Rico). The West Region (California, Washington and Nevada) deployed EDGE to cover 80% of the population; the specific percentage of EDGE coverage to GSM is listed in the spreadsheet.

[REDACTED]

[REDACTED]

[REDACTED]

12. **Provide coverage plots in digital GIS or MapInfo format for AT&T Wireless's and Cingular's TDMA and GSM coverage based on -95 dBm. Differentiate between coverage on the 1.9 GHz and 850 MHz bands and between GSM voice, GPRS, and EDGE technologies. Provide the percent of coverage overlap of TDMA and GSM technologies, and the percent of TDMA capacity to GSM capacity on AT&T Wireless and Cingular system. Provide the percent overlap for each technology between AT&T Wireless and Cingular.**

See Exhibit III.12.

13. **For item (12) above, include a separate record and for all technologies, site locations (latitude, longitude in the North American Datum of 1983, NAD 83, format) frequencies, number and type (Vendor and model number) of base stations subsystem (BSS), number and type (vendor and model number) of base station controllers (BSC) and packet control units (PCU) and the number and type (vendor and model) of switch, CGSN, GGSN, and any inter-working data gateways. Also provide data on the number of deployed handsets' manufacturer, model and capabilities. Also provide the currently available handsets in the stores, their manufacturer, model and capabilities.**

Equipment Site Locations

Data on the site location, number and type of BTSs in Cingular's systems in the listed areas is found in a folder entitled 13 Part I and data on MSC, MSCGW, BSC and PCUs in Cingular's systems in the listed areas is found in Exhibits III.13 and III.8.²⁶

Note that in all cases the vendor for the TDMA/Analog BTS are the same as the MSC vendors. Also note, the GSM BSC vendor is always the same as the BTS vendor.

²⁶ Data for the following markets is not yet available and will be provided by supplement: Reading 118, Washington, and New York City. Reading and Washington are not available because of problems in the software used to gather the data. New York City is not available because of issues in getting the data from T-Mobile, Cingular's joint venture partner. Cingular expects the data from these three markets to be available shortly and will supplement its production at that time. In addition, in areas using the Nokia network, EDGE performance statistics are not able to be reported separately from GPRS performance statistics. Although Cingular has an outstanding request to Nokia to fix the issue, Nokia has not provided a delivery date.

Cingular is unable to provide information on the frequency because the actual assignments or spectrum to be used is not known until a customer accesses the network. This is because the solutions used by Cingular to assign spectrum are based on the current RF environment and provide spectral efficiencies far beyond the traditional fixed allocation methods. As a result, the actual frequencies assignment information requested would be inaccurate, because to a sector are not static and could change from day to day, and in some cases call to call.

To fully understand this point it is important to consider the spectrum deployment methods used by Cingular.

In the case of Analog, spectrum is allocated using tools that take advantage of known RF relationships between cells. These tools assign fixed spectrum to a site and are static in nature.

In the case of TDMA, DCCH spectrum uses the same tools, and methodology to assign spectrum as analog. The TDMA voice assignment methodology varies based on the features available from the infrastructure provider. Nortel, and Ericsson, systems use the same tools and methodologies to assign spectrum as outlined in the Analog section. In Lucent markets, Cingular employs a feature set called Flexible Channel Allocation (FLCA). This feature dynamically assigns channels based on the radio environment of an allocated pool of frequencies.

In the case of GSM, a common hopping pool approach is used across all sectors. In these cases, the same spectrum is used across all three sectors of a site, and more commonly an entire network. Markets that support only GSM however may have opted for an alternative plan. These plans typically divide the spectrum into there main groups

and assigns one group to all the alpha sectors, one to all the beta sectors, and one to gamma sectors. In other markets, ADHOC method of assigning hopping plans is employed.

Handset Information

Deployed handset by Manufacturer, Model Number and Capability is not available. Currently deployed in mobiles can only be broken down by technology types. The following is the distribution by technology.



Additional information on the models, manufacturers, and capabilities of handsets available in Cingular stores is found in a folder entitled 13 (handsets) within Exhibit III.13.

14. **Provide a merger efficiency evaluation and spectrum requirements for the outlined markets and all technologies, similar to that shown in paragraphs 42 through 60 of the Hogg and Austin Declaration including, but not limited to the (a-k) factors given below. Further, provide the estimated cost savings that the merger will provide over the next 10 years and any studies or conceived ideas on integrating the market level networks together and to the regional and national networks. The factors are as follows:**
- a. **Actual performance metrics derived from drive tests, switch data, and gateway data;**
 - b. **Actual cell site locations²⁷ and cell site configuration;**
 - c. **Licensed frequency band and specific frequencies per site per technology;**
 - d. **Current handset capabilities (frequency bands, TDMA, GSM, m-mode, *etc.*);**
 - e. **Compatibility and scalability of the AT&T Wireless's and Cingular's RF and core networks on local, regional, and national levels.²⁸ Include billing, inventory tracking, and subscriber activation systems;**
 - f. **Actual number of BSC, PCU, and switches with their corresponding capacity and compatibility based on local, regional, and national levels;**

²⁷ Assume cell collocation and other spacing scenarios that can be deduced from competitive studies, spectrum analysis, tower ownership or licensing data.

²⁸ For example, could one vendor's TDMA base stations be integrated with another vendor's BSC or switch? Similarly, are the different vendors' TDMA switches capable of handling additional traffic?

- g. **The duration of integrating the two companies networks and systems and the sustained subscriber growth within that time;**
- h. **Rate of conversion of TDMA customers to GSM. Actual growth in GSM, GPRS, and EDGE users and the corresponding capacity requirement per user;**
- i. **Backhaul and interconnect capacity and availability;**
- j. **Specific outages and bottlenecks in both the core and the RF networks;**
- k. **Shared infrastructure with an affiliate or any other company.**

Cingular does not have access to information regarding the AWS network, including the factors listed above. The spectrum efficiency analysis contained in paragraphs 42-60 of the Hogg and Austin declaration was, as stated in the declaration, based upon the simplifying assumption that “AWS’s traffic volumes, network configurations, and service quality levels are the same as Cingular’s and that all sites can be combined.” (Hogg/Austin Decl. ¶ 52).

Cingular is unable to make firm plans for the integration of local or national networks of Cingular and AWS until it able to obtain detailed information on the AWS network after closing. Cingular has, however, begun planning for the integration by creating “model” plans that can be applied on a city by city basis. The most recent iteration of that plan is attached at III.14.

Cingular does not have access to AWS confidential information and is therefore unable to estimate cost savings on an area by area basis at this time. Cingular hereby certifies that the data and/or analyses most responsive to this subpart of the Information Request, including an aggregate estimate of cost savings through 2013, (i) are found in

the synergies model described in response to Question 3 of Attachment A, Section II, and (ii) were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. With respect to the latter, Cingular has produced documents and/or data in response to this subpart from among those documents produced to the DOJ.

The present value of the synergies estimated are summarized in the table below:



We describe in greater detail below the technological, cost, and quality synergies that Cingular believes it will be able to recognize as a result of the proposed transaction. Because Cingular does not have access to AWS confidential information before closing, these synergies are necessarily described at a relatively high level, and quantification of synergies is necessarily preliminary. Moreover, because of the limitations imposed upon integration planning, Cingular's response to this question cannot identify all opportunities for synergies that will become apparent only after the transaction is closed, and this response therefore likely understates the magnitude of possible synergies.

Although Cingular has underway various efforts to improve quality, cut costs, and introduce new products independent of this transaction (described in Cingular's Responses to Question 20 of Attachment A, Section III, *infra*), those efforts are in no way

substitutes for the efficiencies enabled by the proposed merger. Virtually all of those efforts will continue unabated after the merger, and indeed will yield greater efficiency, greater improvement in quality, and greater cost savings as a result of the merger.

We do identify in this response two such efforts – Single Antenna Interference Cancellation (SAIC) and Cingular’s cell site building program – that Cingular expects to modify as a result of this transaction. In each case those modifications will benefit consumers. As described below, rolling out SAIC in order to improve spectral efficiency will increase the cost of handsets and decrease the choice of available handsets. By delaying the need to utilize SAIC, Cingular will reduce its costs and improve its competitiveness. As a result of the transaction Cingular will also be able to avoid building some of the cell sites that it planned to build over the next few years absent the transaction. By utilizing AWS’s cell sites, Cingular will not only reduce capital and recurring variable cost expenses, it will also be able to recognize the trunking efficiencies described in this section that are possible only by combining Cingular and AWS’s cell sites.

A. Coverage and Quality Improvements

The transaction will result in improvements in network coverage and quality, which will enhance the overall competitiveness of the merged company as compared with either company’s current network coverage and quality (or the coverage and quality either company could achieve absent the merger). Cingular has forecast that as a result of the quality and service improvements made possible by this transaction [REDACTED]

[REDACTED]

[REDACTED]

1. Voice service quality improvement

Given Cingular's and AWS's current spectrum constraints and the required support of multiple technologies (analog, TDMA, GSM), it is difficult for either company to provide best-in-class network quality. Network quality is a key factor in competitiveness – important, not only for attracting new customers, but also keeping existing customers from leaving to a competing carrier. Improving network quality towards best-in-class is a major driver of the transaction and is critical to the success of the combined entity.

a. Dropped call and block call reductions from trunking efficiencies

Increases in trunking efficiency will result in fewer blocked calls and/or increased capacity. Cingular does not have access to the detailed information regarding AWS's network necessary to calculate the reduction in blocked and dropped calls but believes that the reductions will be significant. As described in Mr. William Hogg's March 2004 presentation to the Commission, under real-world scenarios, blocked calls are estimated to be reduced by 50% and dropped calls are estimated to be reduced by between 10% and 30%. As Mr. Hogg noted in his presentation, in the city of Chicago alone this could result in 5 million fewer dropped calls and 50 million more calls being completed without blocking each year.

Cingular believes that reduction in dropped and blocked calls will provide significant value to its customers and make the new Cingular a more competitive wireless provider than either Cingular or AWS is today. It is impossible to estimate accurately a dollar value of this important synergy.

- b. Dropped call improvements and voice quality improvements from frequency spacing

Having access to more spectrum allows Cingular to plan the re-use of frequencies at cell sites farther apart and substantially lessen the probability of interference. This will reduce dropped calls. Spreading frequencies further apart will also result in improved voice quality, because it allows the use of less voice compression. The less the voice is compressed, the higher the fidelity and the better the customer experience. These frequency usage efficiencies will increase network quality, thereby enhancing competitiveness and making Cingular a more attractive alternative to consumers. But Cingular is unable to estimate the dollar value of this efficiency.

2. Coverage area improvements

The transaction will result in new areas with “on-network” coverage for both Cingular and AWS customers. Although Cingular and AWS customers were able to roam off-network in these same areas before the merger, by remaining on the network the merged company’s customers will have access to improved service (such as voicemail notification and SMS). Cingular believes that expanded on-network coverage will provide significant value to its customers and make Cingular a more attractive wireless provider, but it is unable to estimate the dollar value of this specific synergy.

Even in the early stages after closing, before the Cingular and AWS networks have been fully optimized, it will nevertheless be possible to improve the service offered to both networks’ customers through the implementation of transparent roaming between the two networks in the same area for placing outgoing calls (“home on home roaming”), and by utilizing directed retry to reach customers for completion of incoming calls when

they are not reachable on their original network. It is estimated that that this will have the effect of a 10% increase in coverage area even in locales where Cingular already offers service. No such improvement would be possible absent this merger.

B. More Efficient Use of Spectrum

The combination of the Cingular and AWS networks will result in the more efficient use of their licensed spectrum. The sources of such spectral efficiency are described in this section and were also described in detail in Mr. Hogg's presentation to the Commission staff of March 12, 2004.

Although spectrum that is "saved" as a result of spectral efficiency has value (*e.g.*, the spectrum could be sold²⁹), Cingular's analysis of the efficiencies arising from the transaction has not been based on the value of the spectrum saved as a result of the transaction since Cingular does not plan to resell the spectrum. Rather, Cingular will use the spectrum saved through spectral efficiencies to roll out new advanced services, improve service quality, and, in some cases, to eliminate the need to add cell sites. (As noted above and described in detail below, by eliminating the need to add cell sites, Cingular is better able to recognize spectral efficiencies and eliminate fixed and recurring variable costs.)

1. GSM

The combination of the AWS and Cingular GSM networks will result in several efficiencies in GSM spectrum use:

a. Increased efficiency due to pooling of hopping channels

²⁹In its recent acquisition of spectrum from NextWave, Cingular paid \$1.62 per MHz/POP. Cingular currently serves 240 million POPs, and spectral efficiencies can be realized across virtually this entire service area. Accordingly, a savings of 1 MHz nationwide would have a value of as much as \$388 million.

The combination of the companies' radio spectrum will allow the use of a larger pool of hopping channels, which are used to carry subscriber traffic, and thus will result in an increase in capacity per MHz. GSM deployments use frequency hopping, so that all the frequencies can be used at every cell site. The use of more hopping channels will allow a greater percentage of the total to be active simultaneously in a given sector, thus increasing the number of radios per hopping frequency in a sector and the capacity per MHz in that sector. Cingular estimates that there will be a 10% increase in capacity/MHz (*i.e.*, equivalent to increasing the number of usable channels by 10%) due to the ability to increase the number of frequencies in the hopping pool.

b. Elimination of redundant control channels

When AWS and Cingular's GSM networks are combined, it is expected that only one set of broadcast control channels (BCCH) will be needed where both GSM networks operate at the same frequency (*i.e.*, both at 850 MHz or both at 1900 MHz). Removal of one set of BCCHs will save approximately 5 MHz, resulting in a corresponding increase in spectrum that can be used for hopping channels. The BCCH, unlike hopping channels, must be deployed in a fixed re-use pattern and cannot be used at every cell site.

Assuming that both Cingular and AWS employ 12 BCCH control channels (24 in total), then the combined network would only require half the number of control channels, or a total of 12 BCCHs. The resulting savings of 12 BCCHs represents 4.8 MHz (12 channels * 0.2 MHz/channel = 2.4 MHz for the uplink and 2.4 MHz for the paired downlink).

There are several ways that the spectrum thus recovered could be used: (1) as a potential source of a portion of the spectrum needed for deployment of UMTS (which requires 10 MHz); (2) as a source of additional frequencies for the hopping pool, to

improve the network's dropped call rate; or (3) as a source of additional frequencies for the hopping pool, to increase capacity at the same dropped call rate. Each method could have its own calculation of savings. Using (3) would result in an increase in usable radio channel capacity of about 10% in a 50 MHz system.

c. Deployment of adaptive multirate codes (AMR)

AMR is described more fully in Cingular's response to Question 20 of Attachment A, Section III.

There are two potential efficiency benefits from enabling AMR at all of the cell sites of the combined GSM network: (1) An instant benefit for service areas not previously converted to AMR upon deploying the software upgrade; and (2) with more cell sites, it will be possible to use AMR-HR (AMR half rate) more widely, due to better interference control and coverage. AMR-HR results in a reduction in backhaul expense, as it allows double the calls to be carried in the same equivalent bandwidth as AMR-FR (AMR full rate). AMR-HR also results in a reduction in capital expenditures as it allows twice as many calls to be carried on the same number of radio transceivers. If AMR-HR penetration is 20%, there is a 10% savings on backhaul costs and radios required for capacity. This will delay future purchases of additional T1 lines and capacity radios, thus reducing backhaul costs (a recurring variable cost) and capital expenditures for new capacity.

d. SAIC

SAIC stands for Single Antenna Interference Cancellation and is a mobile station improvement that adds processing power and algorithms to handsets. It is described more fully in Cingular's response to Question 20. Because SAIC improves sound fidelity and

makes phones more resistant to interference and drop fewer calls, a system with SAIC will have more capacity (theoretically up to 40% in a fully deployed system) than an equivalent system without SAIC.

Absent this transaction, Cingular would be required to implement SAIC to address its spectrum shortage. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

With the transaction and the associated spectrum efficiencies described above, the merged company will not need SAIC as quickly, reducing the handset cost premium and giving terminal manufacturers more time to include this new technology in more of their models, thus minimizing the competitive disadvantage [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Cingular believes that the limited choice of handsets that would result if its customers were forced to utilize an SAIC-equipped phone would be a significant offset to the quality improvement from SAIC, but is unable to reliably quantify the financial effect of this competitive disadvantage.

2. TDMA

a. Increased efficiency due to pooling channels

A larger pool of TDMA communication channels provides more options for frequency planning and permits an increase in capacity/MHz. This is because it is easier to find 10 frequencies for a given TDMA sector when choosing from a pool of 100 than it is to choose 5 from a pool of 50. There are more potential combinations that may be suitable, given that each sector needs a slightly different number. It is estimated that this results in 10% more TDMA capacity, effectively making available 1 MHz for redeployment to GSM or the other technologies.

b. Elimination of redundant control channels

One of the two sets of TDMA control channels would likely become redundant. Eliminating the redundant set would correspondingly increase the available MHz of spectrum. This has only a limited impact, however, because a set of 12 TDMA control channels occupies less than 1 MHz (12 channels * .03 MHz = 360 kHz each for up-and down-links, 720 kHz in all).

3. Analog – Elimination of redundant channels

One of the two sets of analog control channels would likely become redundant. Moreover, it may be possible to reduce the number of voice channels when analog systems are fully combined. (As discussed in Mr. Hogg's presentation, the ability to recognize these synergies will depend in part upon obtaining the consent of the Commission.) As a result, it may be possible to increase capacity on a combined analog network using the same or less spectrum. Cingular typically has 1 control and 2 voice channels per sector, and AWS has indicated that it typically uses 1 control and 1 voice channel per sector. If a combined system could eliminate one or two analog channels per sector, there would be a savings of 1.26 MHz – 2.52 MHz (21 channels * .03 MHz = 630 kHz each for up- and downlinks, or 1.26 MHz per channel conserved), providing more total capacity than the two networks had before.

4. UMTS/3G

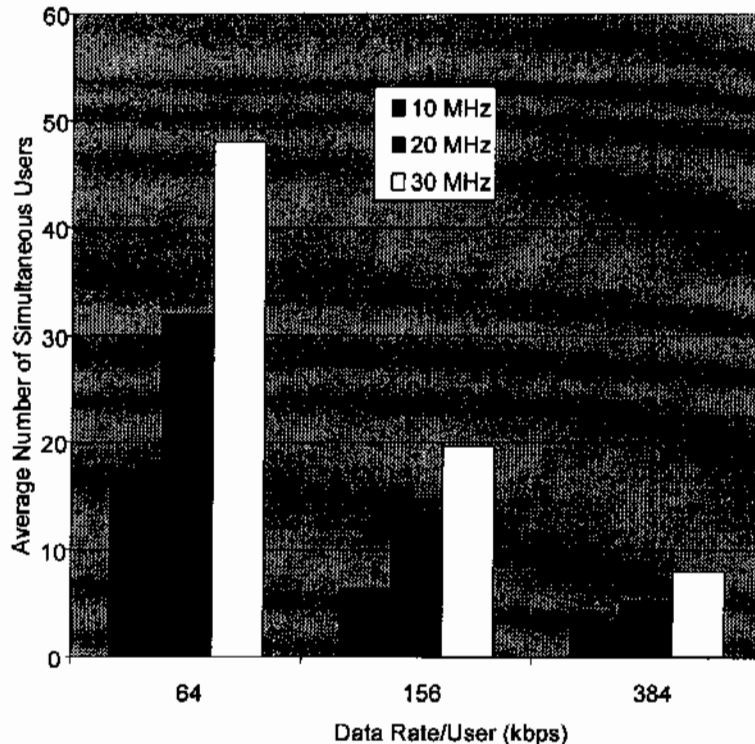
Another impact of the spectrum shortage Cingular (and AWS) face is the inability to roll out 3G services efficiently, quickly, or on a nationwide basis. As we describe in response to Question II.23, absent the merger Cingular would have the spectrum to begin a UMTS rollout in only 38 of the 100 largest MSAs. Even if Cingular decided to proceed with a limited, subscale rollout that would be possible absent the merger – and it has made no decision that such a rollout would make sense – the UMTS service Cingular could launch would be limited to a single 10 MHz UMTS carrier, meaning that the UMTS service would have limited capacity and offer limited bandwidth.

In contrast, the proposed transaction will both create spectrum efficiencies and add spectrum so that Cingular can provide UMTS service more quickly in many more areas than would have been possible without the transaction. Cingular has estimated that

it will have sufficient spectrum as a result of the transaction to begin the provision of UMTS in 70-80 of the top 100 metropolitan areas, double the 38 areas without the transaction.

A number of efficiencies can be recognized by the broader deployment of UMTS that will themselves make UMTS more attractive to customers:

- The merger will give Cingular the spectrum required to offer UMTS service capable of serving far more users at a much higher speed. Having a higher number of 10 MHz UMTS channels allows higher capacity or data rates to the existing users, as illustrated by the following graph:



- Cingular will no longer be at a disadvantage in marketing UMTS service to national accounts to which it would otherwise be unable to offer nationwide UMTS service.
- Because UMTS service will be available nationwide, it will be easier to utilize lower cost national advertising.

- The existence of nationwide service will facilitate UMTS adoption; if customers do not need to be concerned about where the service works, they are more likely to use it.
- Handset and infrastructure volumes will be greater than if Cingular were able to roll out UMTS in only 38 MSAs, resulting in lower costs.

Cingular is, however, unable to estimate values for these efficiencies at this time.

The deployment of UMTS also will provide additional efficiencies, described below. Cingular is, however, able to provide only a qualitative description of these efficiencies rather than estimating their value, although the spectrum freed by use of more efficient UMTS technology has been considered in estimating the number of cell sites that can be eliminated.

a. Spectral Efficiency

Cingular estimates that deployment of UMTS could provide a gain in voice capacity of up to 25% versus serving the same traffic using GSM. Such voice capacity gains would be possible in only 38 of the top 100 MSAs because the minimum of 10 MHz of clear 1900 MHz spectrum required to overlay UMTS is unavailable in the remaining 62 MSAs without this transaction. Absent the merger, Cingular would be able to offer UMTS using only a single 10 MHz UMTS carrier given spectrum constraints. The added spectrum available for UMTS as a result of the merger will allow Cingular to recognize trunking efficiencies, and provide higher aggregate data throughput to maintain average user throughput as more customers are added.

b. Operational efficiency

Operational efficiency will be increased as a result of less need to micromanage spectrum usage. With the transaction, Cingular will not need to deprive its GSM and

TDMA networks of sufficient spectrum for quality service in order to carve out enough to deploy UMTS. Instead, after rationalization of the two companies' networks, it will be much easier to make clear spectrum available for UMTS.

By deploying UMTS in 70-80 of the top 100 MSAs instead of 38, Cingular will also be able to obtain a more efficient core network design/loading. Because most MSAs would not have UMTS absent the transaction, and because the 38 MSAs that would eventually have UMTS absent the transaction are dispersed across the country, the UMTS core network would be inefficient absent the transaction.

Although Cingular is unable to quantify the value of this operational efficiency, it has considered these savings in estimating the headcount savings that will be possible and that are described herein.

C. Marketing Synergies

Cingular expects that scale economies will permit it to recognize significant recurring variable cost savings that will reduce Cingular's marketing cost per gross add by [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Marketing savings are a function of economies of scale; a company that doubles its subscriber count and revenues does not need twice as much advertising or twice as many sales representatives. Cingular has estimated these efficiencies based upon the assumption that AWS's advertising and promotional expenses and sales force are approximately the same size as Cingular's. Cingular has assumed that essentially all of AWS's advertising and promotional expense will be eliminated.

[REDACTED]

[REDACTED]

[REDACTED]

1. Handset Cost Savings

Cingular expects that it will be able to reduce its cost per gross add by [REDACTED]

[REDACTED] through efficiencies obtainable as a result of its increased purchasing volume for handsets. [REDACTED]

[REDACTED]

[REDACTED] Cingular expects to obtain these savings as a result of negotiations with handset manufacturers, who generally give greater discounts to firms that [REDACTED]

[REDACTED].

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. Maintenance and Retention Cost Savings

Cingular expects that it will be able to reduce its maintenance and retention expense, a recurring variable cost, by [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] As described above, the savings in handset acquisition cost are expected to come from negotiations with handset manufacturers, who will give greater discounts to firms that make larger volume purchases.

[REDACTED]
[REDACTED]
[REDACTED]. Cingular is unaware of any alternative to the transaction that can generate such synergies.

3. General and Administrative Cost Savings

Cingular expects that it will be able to reduce its general and administrative cost by [REDACTED]. These savings in general and administrative cost will come from [REDACTED]

[REDACTED]

Because these savings will result from increased efficiency of the merged firm, it is a recurring variable cost.

Cingular expects, however, that it will incur one-time fixed Maintenance and Retention (*e.g.*, customer service, billing and retention programs) and General and Administrative (*e.g.*, finance, headquarters, legal) expenses [REDACTED]

[REDACTED]

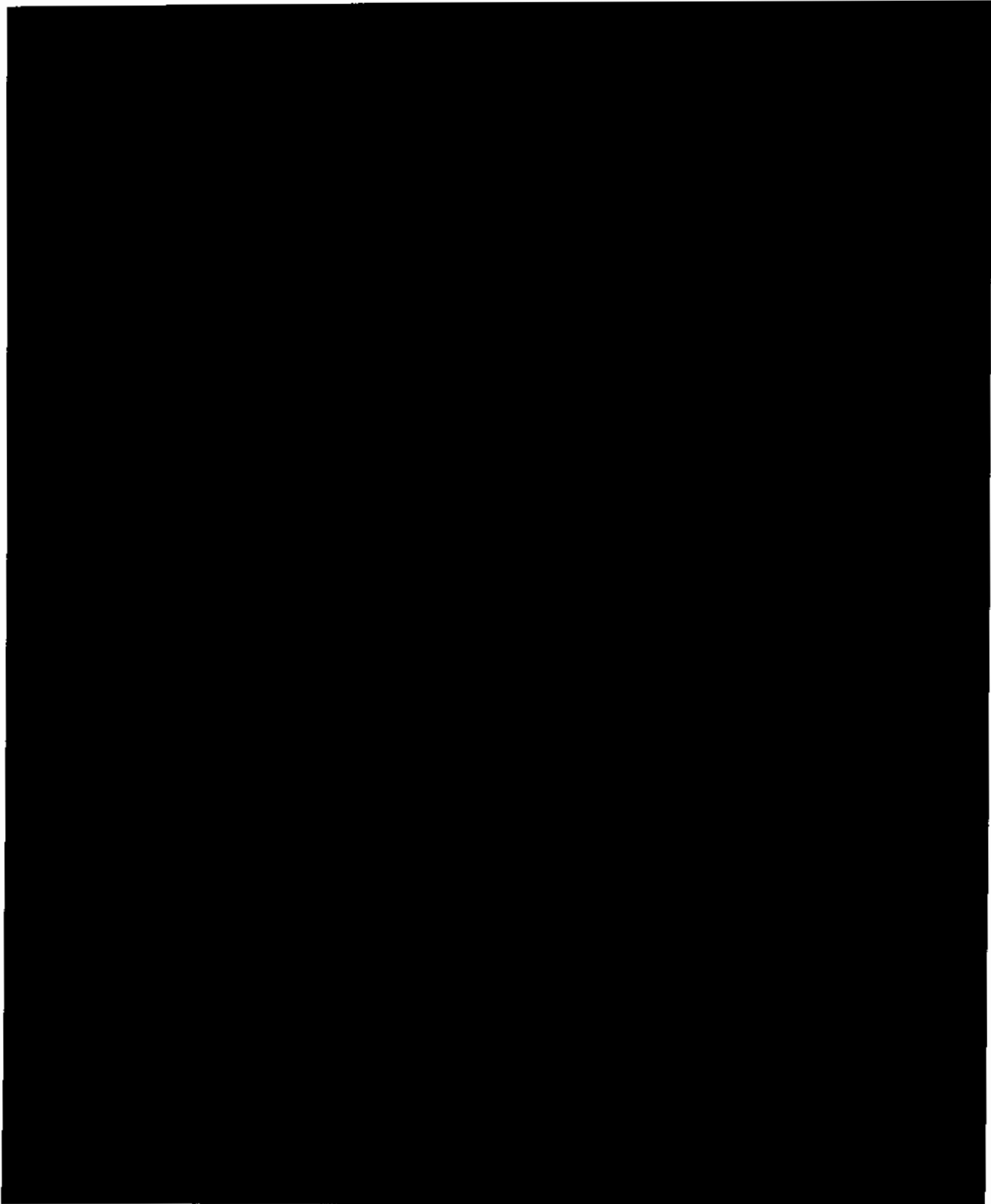
Cingular also estimates that it will be able to eliminate approximately [REDACTED] [REDACTED] it estimates AWS spends on non-network capital expenditures (such as information technology infrastructure) as a result of economies of scale. Cingular anticipates that SG&A capex (such as expenditures on IT) will be reduced by approximately [REDACTED]

[REDACTED]

[REDACTED]

4. Network cost savings

Cingular expects to recognize significant savings in network costs, which are described below. These costs include both one-time fixed cost savings and recurring variable cost savings (as specified below).



a. Consolidation efficiencies

Network cost improvements due to consolidation of facilities resulting from the merger include the following:

(1) Cell site consolidation

The combination of AWS and Cingular's inventories of cell sites results in several types of efficiencies, explained in detail below. It is important to note that cell site consolidation is necessary to obtain the trunking efficiencies described above.

Accordingly, if Cingular and AWS have two different cell sites serving a given area, combining them into a single cell site not only reduces recurring variable cost (e.g., tower rent and service costs), it also enables the merged company to utilize its spectrum more efficiently and reduce dropped and blocked calls as a result of trunking efficiencies.

Where either Cingular or AWS has leased tower space, combining cell sites frees tower space for use by other CMRS firms.

New coverage sites avoided

There are many discrete areas covered by only one or the other network. AWS sites that cover areas that Cingular does not *currently* cover avoid the need to construct new sites to cover such areas. On the chart at the beginning of this section, these sites are indicated in the block labeled "CW additional coverage," wherein Cingular estimates that [REDACTED] sites fall into this category. (The estimate is based upon the actual number of Cingular sites and an estimate of the number of AWS sites; [REDACTED])

As indicated on the “Capex savings” page of the “Network Synergies Backup” spreadsheet attached at Exhibit III.14, [REDACTED] reduce the number of coverage sites over the next three years by [REDACTED]

[REDACTED]. As indicated, Cingular will still need to construct additional sites due to the need for incremental coverage expansion.

New quality/capacity sites avoided

These are sites to be acquired from AWS that render unnecessary a site that would have been built to provide improved capacity and/or quality (e.g., infill sites to provide better quality or capacity through management of interference) in an area where Cingular currently has service.

To determine the number of sites potentially avoided, it was assumed Cingular would only need 60% of the sites originally needed for capacity (the 40% savings comes from the sum of all efficiencies discussed above under “Spectral Efficiency”) and, for the first three years, 50% of the sites originally needed for infill to address interference. On the chart at the beginning of this section, these are indicated in the block labeled “Future CW Quality/Interference Sites,” wherein Cingular estimates [REDACTED] AWS’s sites would be used to avoid the need for new quality improvement sites. (The spreadsheet assumes, for purposes of computing trunking efficiencies, that AWS and Cingular sites are configured with the same number of channels per sector.) On the “Capex savings” page of the “Network Synergies Backup” spreadsheet attached at Exhibit III.14, these quality sites avoided through 2007 are indicated on the rows labeled “Infill sites

avoidable” and “Capacity and quality sites.” [REDACTED]

[REDACTED]

[REDACTED]

Total capital costs avoided as a result of new cell sites avoided

A new cell site would require on average [REDACTED] in capital cost expenditures in 2005, an amount forecast to grow at a rate of [REDACTED]. Total one-time capital costs avoided through 2007 as a result of new cell sites avoided are, as shown on the “Capex savings” page of the “Network Synergies Backup” spreadsheet attached at Exhibit III.14, [REDACTED] is savings from new coverage sites and [REDACTED] savings from avoiding the addition of sites needed to improve quality and coverage.

Duplicate sites that can be eliminated

These are sites acquired from AWS that are located [REDACTED] existing Cingular sites or will not be necessary for quality (*i.e.*, for capacity or for interference control).

On the chart at the beginning of this section, these sites are indicated in the blocks in the left branch labeled “Sites < 15% of Cell Radius,” “Incremental Urban Sites,” and “Incremental Suburban Sites,” wherein Cingular estimates that [REDACTED] [REDACTED] would be subject to elimination as duplicate sites where Cingular can recognize quality and cost efficiencies by combining the sites. It is expected to take three years to decommission [REDACTED] sites, with work beginning in 2005 and savings recognized beginning in 2006. The savings from

decommissioning these sites are indicated on the spreadsheet at the "Network OpEx" page of the "Network Synergies Backup" spreadsheet attached at Exhibit III.14.

The annual lease and related cost for a cell site is [REDACTED]. This is a recurring variable cost. As shown on the Network OpEx page, lease cost savings will total [REDACTED]. Although forecasts beyond 2007 are less reliable, Cingular would expect annual operational expense savings to be even greater in later years as additional AWS sites are decommissioned, with operational expense savings of [REDACTED].

[REDACTED]

[REDACTED]

Outage reduction architectures

The combination of the Cingular and AWS networks will allow the merged company to minimize the effect of outages of facilities and services purchased by Cingular from other providers. In particular, a redundant fixed network architecture can be designed, where appropriate, to improve reliability:

- After the transaction is complete, the merged company will have [REDACTED]
[REDACTED]
- Currently, rural sites [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

The combination of these two practices will likely reduce outage minutes [REDACTED]

[REDACTED]. Improved accessibility will increase customer satisfaction, which should decrease churn, although Cingular is unable to quantify this effect.

(2) Reduction in the number of field technicians

Because the total number of sites will be reduced from what Cingular and AWS currently hold, the total number of field technicians required to maintain the sites can be reduced. [REDACTED]. The derivation of this figure is explained on the "Headcount" page of the "Network Synergies Backup" spreadsheet attached at Exhibit III.14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

(3) Reduction in the number of radios needed at cell sites

At locations where the trunk pool (number of channels used) increases due to the merger, after quality issues have been addressed there will be a reduced need for additional radios (transmitters and receivers) required at those locations to accommodate subsequent increases in minutes of use because of increased trunking efficiency resulting from the larger trunk pool. A preliminary estimate of the system-wide effect is [REDACTED]

[REDACTED]. These are one-time fixed cost savings.

(4) Voice mail efficiencies

The combined network could reduce the amount of required network voicemail elements [REDACTED] due to:

- the elimination of redundant network equipment,
- the integration of two voicemail architectures into one voicemail architecture design,
- redeployment of equipment to other locations, and
- increased utilization.

b. Reduction in UMTS capital expenditures

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. Reduction in number of Network Operations Centers (NOCs)

It is expected that some NOC facilities covering overlapping territories can be consolidated, [REDACTED]. These would be one-time fixed cost savings. Cingular is unable at this time to estimate the value of this synergy.

d. Transport Network Optimization

Cingular describes in its Response to Question 20 its current transport network optimization project, which is designed to reduce facility cost due to optimization of the transport backbone. Cingular is forecasting one-time fixed cost savings [REDACTED]. The broader network of the merged company will be able to be more efficiently optimized, but Cingular is unable at this time to estimate the incremental one-time fixed cost savings.

(1) Economies of scale

Significant efficiencies in the network of the merged company can be gained due simply to the greater scale of operations of the merged firm.

(a) Switches

Cingular describes in its Response to Question 20 its effort to recognize efficiencies as a stand alone company through the deployment of specialized mobile switching centers (MSCs) for gateway (routing of inbound traffic to wireless subscribers) and transit (routing of outbound traffic to wireline networks), which can produce significant cost savings. Gateway MSCs and Transit MSCs become justified as the volume of subscribers and traffic in an area grows. For example, deployment of a Gateway MSC can typically be justified when [REDACTED], and transit MSCs are justified when [REDACTED].

As noted in the Response to Question 20, the merged company will be able to justify the expense of a Gateway MSC or Transit MSC in more areas than Cingular as a stand alone firm. To date, however, no timetable or plans have been developed for such deployment, and Cingular is accordingly unable at this time to estimate the one-time

fixed cost savings and recurring variable cost savings that can be recognized as a result of this efficiency.

(b) More economical trunks

By aggregating a larger volume of traffic in a given region, combining the networks of AWS and Cingular will result in an increased ability to use larger trunks (*e.g.*, DS-3s instead of DS-1s), which will ultimately reduce transport costs. Such reductions would be in recurring variable costs.

To date, however, no timetable or plans have been developed for the consolidation of traffic on larger trunks, and Cingular is accordingly unable at this time to estimate the one-time fixed cost savings that can be recognized as a result of this efficiency.

(c) Volume discounts

Higher volumes of traffic due to consolidation of the AWS and Cingular networks will make Cingular eligible for higher discounts on the telecommunications facilities and services it purchases from other suppliers, where such suppliers utilize discount matrices that vary depending on volume. Such savings will be recurring variable costs, but Cingular is unable to estimate the value at this time.

15. **For each of the markets, provide a comprehensive core and RF network diagram and element listing (include function, type, vendor and model). Designate the expected interface points or demarcation lines with the acquired network and detail the extent that both systems are compatible. In case of incompatibility or expandability requirements upon the merger, provide solution synopsis and the expected capital and recurring costs through 2010. Provide any studies on integrating both companies' local markets' core and RF**

networks. Include and designate separately any shared infrastructure with an affiliate or with any other company.

A representative diagram of Cingular's network is set forth in Exhibit III.15 as Pre-Integration Core Network. Because Cingular has not been able to obtain detailed information regarding the design of the AWS network, it is not possible to identify the expected demarcation lines or interface points with the AWS network or a description of how incompatibilities will be resolved. Nevertheless, Exhibit III.15 also contains a representative diagram of a Post-Integration Core Network. (Representative diagrams of other Cingular networks are part of the response to Question 18 below).

Capital and recurring cost estimates are contained in the synergies model [REDACTED] and described and identified in Cingular's response to Question 3 of Attachment A, Section II.

As noted in the response to Question 14, Cingular is unable to make firm plans for the integration of local or national networks of Cingular and AWS until it obtains detailed information on the AWS network after closing. Cingular has, however, begun planning for the integration by creating "model" plans that can be applied on a city by city basis. The most recent iteration of that plan is attached at Exhibit III.14.

16. **Provide studies or reports for the listed markets for the top six nationwide carriers and any regional carriers offering service in that market that include, but are not limited to, the following metrics: coverage, blockage, interference, and other performance parameters. Provide a summary of the studies for all services separately, including analog, TDMA, GSM, GPRS, and EDGE.**

Responsive data is located in Exhibit III.16.

17. **Provide the merged company's TDMA to GSM active and proposed conversion plans including all milestones in the**

technology, engineering, network operations, facilities, handset capabilities/handset interface, sales and marketing areas. Supply actual GSM subscriber growth and correlate this to the TDMA subscriber base and growth trend.

Because of the Hart-Scott-Rodino rules that prevent Cingular from obtaining competitively sensitive information from AT&T Wireless prior to closing of the acquisition, it is not possible for Cingular to obtain specific information regarding the AWS network that would enable detailed conversion plans at this time.

In general, Cingular anticipates that the transaction will present a number of opportunities to use spectrum in a more efficient manner as described above in response to the Commission's question III.14 (e.g., the combination of TDMA networks may allow the merged company to extract spectrum relating to the elimination of redundant control channels). In addition, as customers and network traffic moves from TDMA to GSM, Cingular continually monitors network demand requirements and moves dedicated spectrum from the TDMA network to the GSM network as demand warrants. This process will continue for the merged company.

Cingular does not track subscriber growth by MSAs or RSAs, and thus cannot provide data corresponding precisely to the requested CMAs. Attached as Exhibit III.17 is a spreadsheet providing GSM and TDMA subscribers and annual growth rates for the Cingular marketing areas corresponding most closely to the CMAs for which the Commission has requested data where such information is available.

18. **Provide a comprehensive diagram and element listing (include function, type, vendor and model) of the national, regional, and local core networks.³⁰ Designate the expected interface points**

³⁰ National Network Systems includes, but not limited to: signaling transfer point, STP, home/visitor location register, HLR/VLR, billing systems, E911, voice gateway switches, and packet or inter-working function data gateways.

or demarcation lines with the acquired network and detail the extent that both systems are compatible. In case of incompatibility or expandability requirements upon the merger, provide solution synopsis and the expected capital and recurring cost through 2010. Provide any studies or conceived ideas on integrating the two companies national, regional, and local networks.

Attached hereto as Exhibit III.18 are a number of diagrams depicting Cingular's current network configurations. Specifically, the following diagrams are attached:

Exhibit III.18	Network
Part A	SS7 Star Architecture
Part B	GPRS Core Network
Part C	Core Voice Network (Cingular)
Part D	Core Voice Networks (Cingular and AWS assumed)
Part E	Core Voice Network (Merged, projected)
Part F	Mobile Switching Center (MSC), Base Station Controller (BSC) and Packet Control Unit (PCU) equipment list and capacities
Part G	Cingular Network End-to-End Diagram

These charts and diagrams demonstrate the equipment and configurations Cingular uses in constructing its networks throughout the country, including in the 58 markets identified in the instructions for questions 7-24. Parts C, D, and E attempt to show in a schematic fashion how the two networks will be merged.

It should be noted, however, that due to antitrust restrictions, until the approval of the merger, Cingular is prohibited from obtaining confidential and/or competitively sensitive information from AWS, including information about the type, structure, and location of its network equipment.

In general, Cingular believes that AWS and Cingular's networks are compatible. Due to the antitrust restrictions, however, Cingular is unable to obtain detailed network

information. Therefore, the information in Parts D and E are based on assumptions and extrapolations from publicly available data regarding AWS's networks.

For these same reasons, Cingular is presently unable to begin planning precise interconnection points or demarcation lines between its own and AWS's network. Similarly, given the paucity of presently available data, Cingular is not yet able to project capital and recurring costs for network integration.

Despite the antitrust restrictions, the following general points can be made about plans for the integration of the two companies' networks and the demarcation points between them.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Part E attempts to show a generalized view of what the integration of Cingular and AWS could look like, given available information per antitrust restrictions. By combining the two networks, it will be possible to share infrastructure and realize synergy benefits. It is estimated that the combined network will reduce the amount of interconnect and facilities [REDACTED] due to trunking efficiency gains and by reducing the number of redundant, point-to-point connections between MSCs and End Offices and Tandems. In addition, it is estimated that the combined network will reduce the amount of core network elements by [REDACTED] due to the elimination of redundant network equipment and by more efficient use of existing network equipment.

The combined network should reduce the amount of required network elements (MSCs, BSCs and transcoder rate adapter units) by [REDACTED] due to:

- the elimination of redundant network equipment and building facilities,
- the evolution of 2 single-layer core networks in to 1 hierarchical core network,
- the conversion of certain redundant network equipment types into other network element types that support a hierarchical network architecture,
- the redeployment of network equipment types to other locations,
- increased utilization and less overhead of existing network equipment, and
- increased trunking efficiency.

The merger efficiencies stated above are expected to occur because:

- both Cingular and AWS utilize the same wireless standards (TDMA and GSM),
- both Cingular and AWS utilize similar network architectures,
- in many markets, it is believed that both Cingular and AWS use equipment provided by the same vendor,

- all GSM signaling interfaces, with the exception of the A-bis interface, are open (GSM signaling compatibility),
- all TDMA networks utilize a revision of IS-41 for signaling (TDMA signaling compatibility),
- there is a high degree of GSM equipment compatibility, and
- the MDN (mobile directory number) for both TDMA and GSM subscribers can be moved from one switch to another.

19. **Provide detailed information on AT&T Wireless's and Cingular's, as well as the merged company's, current and expected bottlenecks and outages in the national, regional and local markets for both the core and the RF networks. Specify, in addition to any added spectrum, how and to what extent, would the merger alleviate or worsen these bottlenecks or outages. Include compatibility and market-specific details in the showing. Provide capital and recurring costs through 2010 in providing such solutions.**

Due to antitrust restrictions, Cingular is prohibited from obtaining confidential and/or competitively sensitive information from AWS until the approval of the merger, including information about the type, structure, and location of its network equipment and capacity. These antitrust restrictions limit Cingular's ability to speak specifically about the bottlenecks and outages of AWS's network or of the combined network. The information provided in this response is based on Cingular's network and projections regarding the combined networks based on publicly available information. Because of this limitation on data, capital and recurring cost estimates are not available.

Outages: The most lengthy and impacting outages are those caused by a disaster external to the network, such as a hurricane, tornado, earthquake, power failure or terrorist attack. Cingular's acquisition of AWS, a major carrier that has implemented both GSM and TDMA standards, will bring incremental resources in the form of equipment, spare parts, transport facilities, recovery locations and expertise to the company that can be used in the event of a disaster.

Loss of a switching element or facility (GSM MSC, GSM BSC or TDMA MSC) would be one of the most devastating events that could happen to the network. These elements are not designed to be geographically redundant and there will be a long lead time to secure a replacement, connect it to the network and configure it for operation.

With the AWS acquisition, new opportunities will exist for switching facilities to be used to temporarily carry traffic if the regular switching element is out of service. Cingular will investigate if AWS has made arrangements for a Switch on Wheels (SOW) or other back up plans for switching. Cingular will also investigate whether any switches in the combined company may be decommissioned and used as a SOW or in other sparing arrangements. The scale of the combined company would support an enhanced recovery strategy including one or more SOWs. This strategy would provide significant enhancements in Cingular's ability to recover from the loss of a switching facility as quickly as possible. [REDACTED]

[REDACTED]

The combined company will control a larger pool of resources for recovering the network. These include:

- Portable generators for use at cell sites when commercial power is lost
- Cell on Wheels (COW) – Mobile cell sites that can be used to recover damaged cell site locations or augment capacity in a specific area for emergency communications.
- Vehicles
- Spare parts
- Experienced personnel to recover the network

In areas where Cingular and AWS networks overlap, the combined company will have a greater number of cell sites (more closely spaced) serving a given area. This tighter cell site grid would provide overlapping coverage and allow adjacent sites to

handle traffic from impaired cell sites, in the event of the loss of power or damage to one or more cell sites. Service impairments would be less apparent to subscribers during outages due to this more resilient network. Sample outage data for the relevant markets over a 30 day period is set forth in Exhibit III.14.

Bottlenecks: Currently, Cingular's networks are engineered to the following standards for trunk blocking:

To ensure system quality for our customers, the following grade of service standards are recommended maximum values. The funding of trunking capacity growth will be based upon a 20-month forecast view. Trunking growth will be approved based upon the GoS standards with route relief placed in-service 1 trimester before the specified projected exhaust date. Attempt to limit trunk additions to no more than three per year per trunk group, and maintain utilization levels sufficiently high so as not to unnecessarily trigger MSC/GMSC/Tandem port expansion.



[REDACTED]

Combining the Cingular and AWS network will result in increased trunking efficiency. The scale of the integrated networks will provide opportunities for a larger trunk group in cases where two smaller trunk groups existed prior to the acquisition. The increased efficiency is because a caller is more likely to find a vacant channel when a larger number of channels are pooled together. Information regarding critical core elements (SS7 links, ports, processor, etc) that have reached and/or exceeded established triggers is set forth in Exhibit III.14. This information is monitored daily and set forth in a monthly report. As appropriate, action plans to relieve the trigger are described in the referenced job specification ("JSPEC").

20. **Provide any current or planned initiatives that will lead to improved quality of service, customer retention and competitiveness including, but not limited to: special promotions, customer care, technology development, network buildout and expansion. Show the effect of these initiatives on customer churn since their inception. Project results through 2007.**

Cingular hereby certifies that documents most responsive to current and planned initiatives to improve quality of service, customer retention, and competitiveness were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the IISR Act. Accordingly, Cingular has produced documents and/or data in response to this issue from among those documents produced to the DOJ. In addition, additional documents relating to Cingular's 2004 and 2005 network buildout expansion plans are produced at Exhibit III.20.

We describe below in narrative form Cingular's plans that are described in far greater detail in these documents. Cingular is not able to identify the impact of each of these initiatives on customer churn. Information on Cingular's overall customer churn rate is contained in the file designated Cingularci within Exhibit III.3.

Cingular's plans for new products absent the merger are comparatively modest, and pale in comparison, for example, to the opportunity for a nationwide rollout of high speed UMTS data services that can only be enabled by the transaction. As we describe below, Cingular is able to plan for only a limited UMTS rollout absent the merger, one that will be of inefficient scale and that will offer functionality far inferior to that enabled by the merger.

Cingular's quality of service is affected by the spectrum constraints resulting from the need to support analog, TDMA, and GSM networks. Although Cingular is pursuing technological improvements that would enable it to use existing spectrum more efficiently, any such gains would be modest and an inadequate substitute for the efficiencies enabled by the merger that are described in our Response to Question 14 of Attachment A, Section III, and in Mr. William Hogg's presentation to the Commission's staff.

Finally, Cingular is engaged in a variety of routine cost-cutting efforts described in this section in order to improve its competitiveness. The proposed merger will not only increase the effect of these efforts, but also create substantial additional cost-cutting opportunities not possible without the merger that are described in the Response to Question 14.

A. Current Promotions and Customer Care Initiatives

Over the course of the past year, Cingular has initiated several promotions and customer care initiatives aimed at reducing customer churn and improving customer satisfaction. These are described below, along with their impact on churn. Cingular anticipates that it will maintain these promotions and initiatives through the merger with AWS. The impact of these initiatives on churn to date is discussed below. Because of the early stages of the merger with AWS, post-merger projections of churn level are not yet available.

1. Rollover.

This offering allows customers to apply unused minutes from prior monthly allowances to the current month. [REDACTED]

[REDACTED]

Customers see value in this feature as it limits the cost of overage charges by allowing for the minutes customers have purchased on a monthly basis to be used in future months.

Rollover is available on Cingular Nation plans with \$39.99 access and higher.

2. Cingular Nation.

During the last quarter, [REDACTED]

[REDACTED]

[REDACTED]. This plan offers the largest all-digital combined voice and data network in the nation. Customers never pay roaming or long distance charges, plus they receive popular calling features such as unlimited nights and weekend calling starting at 9:00 PM, and unlimited mobile-to-mobile calling to any Cingular customer from anywhere in the nation. [REDACTED]

[REDACTED]

[REDACTED]. Cingular has seen a significant improvement in churn with customers on Cingular Nation plans when compared to similar plans that only have regional footprints with no roaming or long distance charges.

3. Family Talk.

Customers that want to add family members to their account can do so easily with Family Talk. This affordable plan allows customers to share minutes with the primary user for only \$9.99 per additional line on national plans with primary access of \$59.99 and higher. Unlimited nationwide mobile-to-mobile calling allows the family members always to talk to each other (in addition to any other Cingular customer) without using their monthly allocation of minutes. Unlimited nights and weekends also allows family member to make free calls nationwide to any phone during nights and weekends starting at 9:00 PM. Rollover also allows families to roll over their unused anytime minutes month to month for up to 12 months. This helps families manage their monthly wireless bills, limiting higher cost overage charges.

4. Handset upgrades.

Cingular makes handsets available to customers at prices well below its own cost in order to encourage subscribership. These subsidies benefit consumers by giving them access to higher quality handsets at low prices.

Cingular's standard phone upgrade policy [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. Cingular Service Summary.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

B. New/Improved Products

[REDACTED]

[REDACTED]

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

[REDACTED]

[illegible]

This service has already been rolled out in parts of Cingular's territory [REDACTED]

[REDACTED]

10. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. Future plans

may include offering new features, such as [REDACTED]

[REDACTED].

11. Evolving GPRS to EDGE

Cingular is continuing to roll out its EDGE data network, which offers higher data speeds than GPRS and facilitates the use of more advanced applications – although the speeds available with EDGE are far lower than those available with UMTS and, accordingly, some applications that would be enabled by UMTS will not be available with EDGE.

12. UMTS Trial

Cingular has recently begun a UMTS trial with Lucent Technologies. Because the launch of UMTS will require 10 MHz of “clear” spectrum, Cingular will be unable to launch the service in any area where it has less than 35 MHz (or less than 30 MHz in areas where Cingular does not provide analog service). Even where Cingular has 35 MHz of spectrum, the launch of UMTS will require “carving” spectrum away from TDMA and GSM services, resulting in a possible loss of quality for these services.

Cingular believes that, absent the merger, it could launch UMTS in only 38 of the top 100 MSAs.

Limited deployment of UMTS in only 38 MSAs would result in a less efficient core network design/loading than possible with the merger. Because most MSAs would not have UMTS, and because the 38 MSAs would have limited capacity and are dispersed across the country, the UMTS core network would be inefficient. Cingular's inability to roll out UMTS nationwide will also place it at a competitive disadvantage:

- Handset and infrastructure volumes will be lower if Cingular is able to roll out UMTS in only 38 MSAs, resulting in higher per unit costs.
- With fewer potential subscribers, it will be harder for Cingular to justify the expense of specialized application development.
- Cingular will be at a disadvantage in marketing UMTS service to national accounts, as well as to the growing number of individual customers accustomed to seamless national functionality wherever they travel, if it is not able to offer service nationwide.
- Cingular will face advertising inefficiencies. It is difficult to utilize national advertising for a service that is not truly nationwide.
- Lack of nationwide service may discourage UMTS adoption; if the customer needs to ask if the service will work where they are going, they are less likely to use it.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

In the 26 MSAs where Cingular has 35 MHz of spectrum (or 30 MHz but does not offer analog service), carving out 10 MHz of spectrum (the minimum amount of spectrum that must be dedicated to UMTS service) is more likely to have a quality impact [REDACTED]. Where Cingular concluded that the quality impact from such carving was unacceptable, Cingular [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

If Cingular decided that it could not effectively launch UMTS in only 38 MSAs, it would delay launch until [REDACTED]

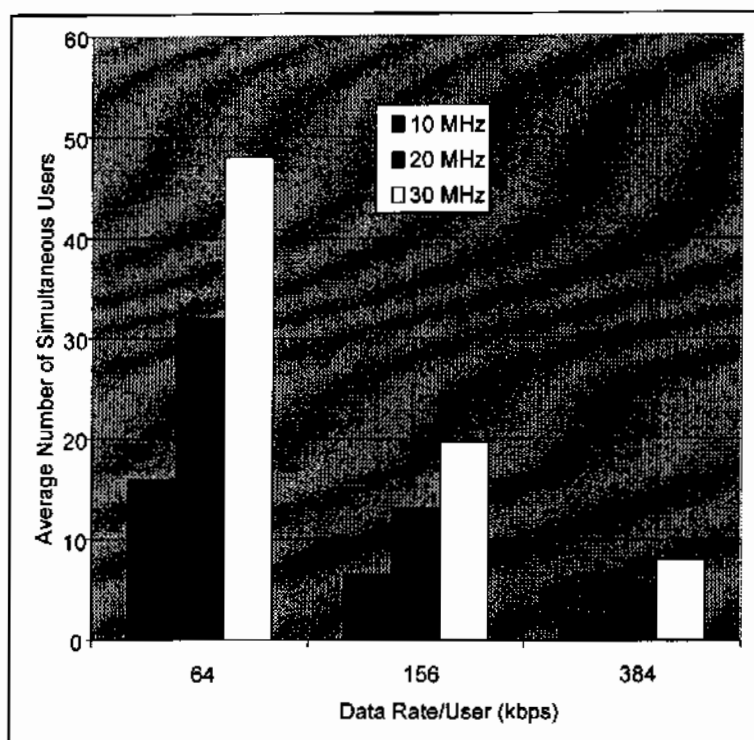
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

When available, UMTS will offer customers higher data rates than Cingular's current GPRS and EDGE services, although these data rates will be limited by constraints on the amount of spectrum available to Cingular absent the merger. Actual data throughput will also be a function of the number of users within a cell site utilizing the service simultaneously, as shown on the chart below:



The 38 MSAs in which Cingular might be able to roll out UMTS are largely limited to supporting a single carrier (*i.e.*, 10 MHz) for UMTS. Cingular's limited spectrum means that it will lack the ability to support significant numbers of concurrent users.

13. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

B. Plans to Improve Quality

Cingular has limited options available to it to improve quality absent the additional spectrum and efficiencies enabled by the proposed transaction. We outline below steps that Cingular plans to utilize to seek to improve quality absent the transaction.

1. Coverage

In order to improve the coverage of its network and improve the value of its service to customers, Cingular expects to [REDACTED]. Additionally, Cingular continues to negotiate international roaming agreements to insure customers the best cost and coverage while roaming outside the USA.

Although representing a substantial expenditure of capital, Cingular's coverage expansion plans absent the merger pale in comparison with the coverage expansion enabled by the merger. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2. Improved Spectral Efficiency

As noted, Cingular is seeking technological improvements that may provide more efficient use of its existing spectrum, allowing it to serve more minutes of use or megabytes of data per MHz of spectrum. Remaining capacity additions for GSM are limited in impact, however, because the technology is reaching full maturity. Improvements that can be achieved tend to be more limited in smaller spectrum position regions. In short, the remaining capacity gains are limited because of the maturity of the technology and the limited spectrum Cingular has to work with absent the merger.

(a) AMR

AMR vocoder improvements, specifically AMR with link adaptation and AMR-HR (half rate), provide efficiency improvements over a network lacking AMR or having only AMR-FR (full rate). Because Cingular has already implemented AMR, including AMR-HR, in its GSM overlay areas, there are only limited gains possible in those areas from operational “tweaking” of the technology. Cingular’s older GSM-only systems in California/Nevada and the Carolinas should achieve more efficiencies from implementation of AMR-HR because most handsets and base stations use the older, less efficient EFR (Enhanced Full Rate) vocoder. Efficiencies will be achieved in these older systems as new AMR handsets are added into those areas and more base stations are upgraded. Accordingly, AMR should be able to produce savings for Cingular without the transaction, but they would be much lower than the post-merger savings stated in the Response to Question 14.

(b) Single Antenna Interference Cancellation (SAIC)

As discussed in Responses to Question 14, SAIC is a new algorithm implemented primarily in the handset that increases the handset’s resistance to interference. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. UMTS Technology Efficiency

Cingular estimates that deployment of UMTS could provide a gain in voice capacity of up to 25% for the minutes used versus serving the same traffic using GSM. As explained above, such voice capacity gains would be possible in only 38 of the top 100 MSAs because the minimum of 10 MHz of 1900 MHz spectrum required to overlay UMTS is unavailable in the remaining 62 MSAs. Even to roll out UMTS in these 38 MSAs will require aggressive carving of existing spectrum (*i.e.*, taking spectrum away from existing uses, which would negatively impact quality). Moreover, absent the merger there would be limited ability to grow beyond a single 10 MHz UMTS carrier given spectrum constraints until additional spectrum is available. This spectrum limitation will limit Cingular's ability to recognize trunking efficiencies during the UMTS rollout. (As noted elsewhere in Cingular's responses to these interrogatories, limiting UMTS to a single carrier will also limit Cingular's ability to provide high data rates in areas of high demand). Additionally, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. Implementation of Quality of Service management in the Radio and Core Network

QoS management would allow the prioritization of traffic on the network, scheduling, and the assignment of network resources based on the quality of service of a given service or subscriber. For example, QoS management would allow Cingular to segment data traffic into categories of Background (which can happen outside the view of the user and is not at all time or delay sensitive), Interactive (such as instant messaging or email, which is time sensitive, but can tolerate delay), Streaming (such as streaming video where latency must be low, but packet loss can be tolerated), and Conversational (very low latency needed for such services as voice over IP). Implementing QoS management would allow Cingular to provide guarantees around a customer's service experience.

C. Cost Savings to Improve Competitiveness

1. Network Transport Cost Savings

a. Transport Network Optimization

Cingular has a project underway aimed at optimizing its transport network for voice and data, with the goal of reducing the cost of facilities, documenting what is in the network, improving overall quality of service, and reducing outages via faster response times. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

b. ATM evolution beyond the Backbone

Cingular currently uses an ATM (asynchronous transfer mode) backbone network to carry traffic across the regional and national networks. Several evolutions described below for the use of the ATM network would allow Cingular to increase the savings of this network.

(i)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

(ii) ATM to the cell site

Deploying ATM to the cell site would facilitate TDMA packet pipe optimization, data optimization, and GSM idle mode suppression. ATM transport can be used in certain situations to improve the efficiency of facilities used between the cell sites and core network. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. Dynamic Abis

With the deployment of EDGE packet data service, a given radio time slot can support up to approximately 50 kbps of data. In the transport from the cell site, the radio timeslots are mapped into 16 kbps pipes. Since EDGE throughput on the radio side can exceed the typical timeslot allocation in the transport, it is necessary to dedicate additional transport capacity to EDGE to ensure a given user experience can be supported. EDGE is being deployed in virtually all cell sites, so transport capacity must also be dedicated to ensure users that throughput can be assured should they try to use a given cell.

Dynamic Abis is a feature that allows the pooling of the transport resources for both voice and data over the entire cell site, which allows for oversubscription of the transport resources. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

d. Switching

(i) Gateway Mobile Switch Centers (GMSCs)

Cingular is evaluating the use of GMSCs to improve efficiency of inbound LEC traffic in least cost routing to the destination Mobile Switching Centers ("MSCs"). Customer numbers are typically terminated to the MSC in a given local area. When a call comes in for a wireless subscriber, the mobile is paged and the call is connected via the MSC. As subscriber counts grow, additional MSCs will be added to a local area. This creates the potential that the subscriber's number is hosted on one switch, while that subscriber is currently in an area served by another. In this case, the MSC that is hosting

the number receives the call from the landline network and must tandem the call to the MSC serving the subscriber. This consumes multiple ports on the MSCs, reducing their available capacity. As demand continues to grow, adverse effects from this inefficiency increase.

Typically [REDACTED] are candidates for GMSCs. A GMSC hosts all the numbers for its area. It performs a lookup on the subscriber to determine which MSC is currently serving the customer and directly routes the call to that MSC. GMSCs do not require the mobility management software of a typical MSC, so the price per port for GMSCs is significantly lower than for a mobility MSC. Introducing GMSCs into [REDACTED] would increase trunking efficiency, shift tandem traffic to lower cost GMSC ports, and free up higher priced mobility MSC ports for re-use.

Gateway MSCs cost [REDACTED]
[REDACTED]
[REDACTED]

Because the number of MSCs required is a function of subscriber base, Cingular expects the merged company to recognize significantly larger savings from GMSCs because the merged company will have [REDACTED]

(ii) Transit MSCs

Transit MSCs are designed to improve the efficiency of routing outbound traffic to the LECs by aggregating the traffic from various mobility MSCs towards the landline network. The advantages are larger trunk groups, avoiding having to tandem through mobility MSCs to reach smaller use trunk groups, and significantly lower cost per port of

a Transit MSC versus using mobility MSCs. Transit MSC are typically justified in areas with [REDACTED]

Transit MSCs cost [REDACTED].

Cingular has not yet estimated the number of Transit MSCs that would be used or the net capital savings that could be realized.

(iii) [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

2. Marketing and Advertising Initiatives

Cingular is working to more efficiently utilize its marketing and advertising

budget [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

3. Roaming Expense

Cingular is seeking to reduce the expense it incurs when its customers roam off
the Cingular network through [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

4. IT/Billing Expense

Cingular is working to control its information technology and billing expense by

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. Customer Care Improvements

Cingular is working to reduce its customer care expense [REDACTED]

[REDACTED]

[REDACTED]

a. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

b. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

d. [REDACTED]

[REDACTED]

[REDACTED]

e. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

f. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

g. [REDACTED]

[REDACTED]

[REDACTED]

h. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6. Supply Chain Expense

Cingular's efforts to reduce its supply chain expense include:

a. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

b. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

d. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

21. **Provide a comprehensive project plan including resources, duration, and cost of integrating the two networks and systems at national, regional, and local levels. Provide the projected level of facilities elimination including, but not limited to, cell sites, switch locations, and sales point of presence. Provide the projected reduction in operational and capital investment due to the merger. Provide specific studies that support the cost savings. Cingular should also project the cost for fixing any current and identified future problems for each system and the merged company.**

Because Cingular does not have access to AWS confidential information it will not be able to create a comprehensive project plan for integrating the two networks until after the merger closes.

Cingular hereby certifies that documents most responsive to projected cost savings from facilities elimination and other operational and capital expense savings were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. Accordingly, Cingular has produced documents and/or data in response to this issue from among those documents produced to the DOJ. In addition, estimated costs for fixing current and identified future problems are included in Mr. Gasper's synergies model. A narrative description of the synergies possible from consolidation of the two networks is contained in Cingular's response to Question 14 of Attachment A, Section II.

22. **Provide any actual and conceived plans, studies, or analyses of the merger's impact on the customer base of AT&T Wireless and Cingular. Provide details on plans and strategies on product integration, billing and customer service integration and enhancement. Provide results of any customer satisfaction surveys for all services.**

Cingular hereby certifies that the data and/or analyses most responsive to this question of the Information Request were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. Accordingly, Cingular has produced documents and/or data in response to this question from among those documents produced to the DOJ.

23. **Provide information on UMTS laboratory and field trials, and UMTS implementation plans, including transitional plans from GPRS/EDGE. Provide any data acquired by AT&T Wireless and Cingular from other trials or implementations in other countries. Include actual data on traffic modeling, capacity requirements, spectrum requirements, feasible applications,**

**and the extent of overlap with GPRS/EDGE deployment.
Provide analysis on the breakpoint where the market demand
requires the implementation of UMTS instead of EDGE.**

Cingular is completing the equipment deployment for its UMTS laboratory and field trial in conjunction with Lucent Technologies and is targeting July 22 for the beginning of the trial. The goal of the trial is to evaluate UMTS radio frequency (RF) design considerations and issues with overlaying UMTS on an existing GSM network. The trial will permit Cingular and Lucent to:

- Understand and evaluate the ability of UMTS to match the coverage of GSM for voice service (UMTS 1900 MHz on a 850 MHz designed grid) and to understand the capacity achieved by that coverage match solution.
- Understand the system performance requirements of UMTS relative to antenna system design to achieve minimal trade-offs to the existing GSM system performance.
- Understand and develop rules for selecting sites in the converged network planning process given the considerations of UMTS performance requirements.
- Understand and evaluate the trade-offs in system performance and optimization to GSM and UMTS if antenna systems are shared versus separate in design.
- Understand and evaluate how a UMTS system is optimized for capacity and coverage over time as load is added or the RF environment changes.
- Evaluate the capability of RF Planning and Performance Management tools to accurately predict and manage the performance of the UMTS system.
- Understand and test data performance of the trial system, in particular, to measure the throughput rates achieved in the various design scenarios.
- Understand and test 2G network interoperability with UMTS including that handover from GSM to UMTS and vice versa of voice and data services. Examine the success of handovers and the quality of the experience.
- Build expertise for UMTS testing in the Cingular Labs in preparation for evaluation of the commercially selected equipment providers.

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Information on the trial plans, as well as preliminary analyses of spectrum requirements are found in the DOJ Documents of Bill Hogg and Mike Watson.

Cingular has obtained only limited information from UMTS trials or implementations from other countries (and has not obtained any information from AWS outside of the context of due diligence in connection with this transaction). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

24. **Throughout all US markets, including Puerto Rico and the US Virgin islands, provide data on whether SBC or BellSouth operate or own long distance voice services, local exchange carrier services or provide/operate telecommunications transport and transmission facilities.**

SBC and BellSouth provide local exchange carrier services and long distance voice services throughout the geographic areas indicated on the maps provided in Exhibit III.24 to this submission.

With respect to the provision of local exchange services and intraLATA toll services, SBC generally owns and operates the associated transport and transmission facilities. In addition, in connection with the provision of local frame relay service to customers within SBC's serving area, in some instances SBC provides service to those customers' locations outside the SBC serving area. In these latter situations, SBC connects those customer locations to SBC's frame relay network through resold special access facilities.

With respect to the provision of interLATA services, SBC is certificated to provide long distance service in all 50 states and the District of Columbia. SBC offers originating long distance service in the same areas where SBC offers local exchange service, and offers terminating long distance service in all parts of all 50 states and the District of Columbia. SBC offers intraLATA and interLATA toll service over a network that has both leased and owned components, and often purchases terminating minutes from other interexchange carriers.

With respect to the provision of local exchange services and intraLATA toll services, BellSouth generally owns and operates the associated transport and transmission facilities. In addition, in connection with the provision of local frame relay service to

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customers within BellSouth's serving area, in some instances BellSouth provides service to those customers' locations outside the BellSouth serving area. In these latter situations, BellSouth connects those customer locations to BellSouth's frame relay network through resold special access facilities.

With respect to the provision of interLATA services, BellSouth is certificated to provide long distance service in all 50 states and the District of Columbia. BellSouth offers originating long distance service in the same areas where the company offers local exchange service, and offers terminating long distance service in all parts of all 50 states and the District of Columbia. With respect to the provision of interLATA services to consumer mass market and small business customers, BellSouth generally leases transport and often purchases terminating minutes from other interexchange carriers. As for enterprise customers, BellSouth generally provides long distance services as a reseller. In providing long distance services to enterprise customers within BellSouth's serving area, BellSouth sometimes provides these services on a resold basis to some of those customers' locations outside the BellSouth serving area.

ATTACHMENT B

Document Request

1. **Provide all documents relating to competition between local telephone service and the provision of any relevant service in any relevant area, including, but not limited to, market studies, analyses, forecasts and surveys relating to:**
 - a. **The loss of local telephone service customers to mobile wireless service and any attempts to win these customers back from mobile wireless service providers or to stem losses of these customers to mobile wireless services, including, but not limited to,**
 - i. **Data or studies indicating that local telephone service customers have disconnected their local telephone service and are using a mobile wireless service in lieu of local telephone service (including, but not limited to figures on subscribers lost or gained).**
 - b. **How consumer or business customers or competitors view or perceive the offering of a bundled offering that includes local telephone service and wireless service offered by your company or any other carrier (including the impact of not offering a wireless service or the impact of pricing on decisions to take local telephone service or any relevant service). A bundle of services includes, but is not limited to, services billed on one bill or service for which a discount is received if purchased with other services, even if the customer is billed separately for each service.**
 - c. **Any actual or potential effect on the supply, demand, cost or price of any relevant service as a result of competition from other services including, but not limited to local telephone service (including DSL or other data services), Wi-Fi, and cable modem service, regarded by customers as a potential substitute.**

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- d. **Any actual or potential effect on supply, demand, cost or price of DSL, Wi-Fi and cable modem service as a result of competition from wireless data services regarded by customers as a potential substitute.**
- c. **The effect of local number portability on competition and customer migration from wireline to wireless telecommunications services.**

Cingular hereby certifies that the documents most responsive to this question of the Information Request and its subparts were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. Accordingly, Cingular has produced documents in response to this question from among those documents produced to the DOJ.

- 2. **Provide all documents relating to pricing plans, pricing policies, pricing forecasts, pricing strategies, pricing analysis, and pricing decisions that consider the effects of actual or potential competition between any relevant service and any local telephone service (including DSL or other data services) or cable modem service within any relevant area.**

Cingular hereby certifies that the documents most responsive to this question of the Information Request were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. Accordingly, Cingular has produced documents in response to this question from among those documents produced to the DOJ.

- 3. **Provide all plans, studies, strategies, policies, corporate goals, or contracts in which you have proposed or offered mobile wireless services bundled with local telephone service, including the effect on your company's or any other person's plans to offer or provide a mobile wireless service bundled**

with local telephone service or on your company's or any other company's competitive position in local telephone service, including, but not limited to: any change in churn rates, market shares, or revenues attributed to any loss or gain in customers. A bundle of services includes, but is not limited to, services billed on one bill or service for which a discount is received if purchased with other services, even if the customer is billed separately for each service.

Cingular hereby certifies that the documents most responsive to this question of the Information Request were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. Accordingly, Cingular has produced documents in response to this question from among those documents produced to the DOJ.

4. **Provide all documents that refer to, discuss, evaluate or compare the advantages and disadvantages of local telephone service (DSL or other data services) or cable modem services to different wireless technology platforms (e.g., TDMA, CDMA, GSM, iXRTT, eEDGE, GPRS, VMTS, and EV-DO/DV), including, but not limited to analysis of spectral efficiency and spectral capacity, discussions of technological developments for particular technology platforms, the evolutionary path to an improved or "next generation" technology platform, cost and pricing considerations, acceptance of and projections of the number of customers that are likely to subscribe to each relevant service based upon different technology platforms, and price premiums that might be obtained by offering any relevant services based on a particular technology platform.**

Cingular hereby certifies that the documents most responsive to this question of the Information Request were previously produced by Cingular, BellSouth and/or SBC to the DOJ in response to its Second Request pursuant to the DOJ's review of the proposed AWS/Cingular transaction under the HSR Act. Accordingly, Cingular has produced

documents in response to this question from among those documents produced to the DOJ.